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JUNE, 1954

Telephone and Management Engineer

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THE NATIONAL TELEPHONE MAGAZINE

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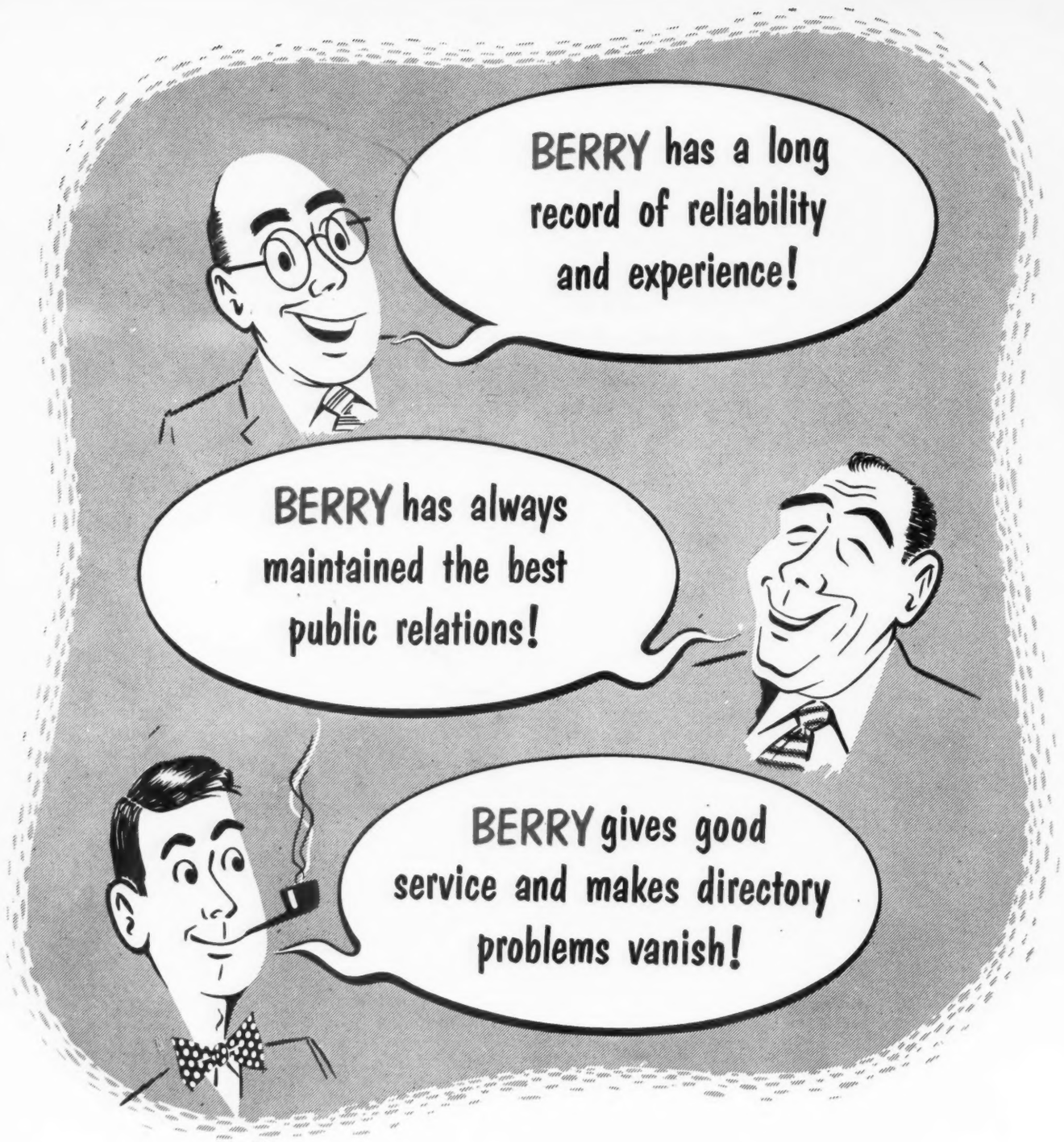
★ Independent Executives Meet In Colorado
★ Telephone Problems In A Changing Era, *by Warren B. Clay*
★ Toll Compensation Studies Go Forward, *by W. Roy Jarmon*
★ Blueprint For A Traffic Force, *by Ruth E. Richards*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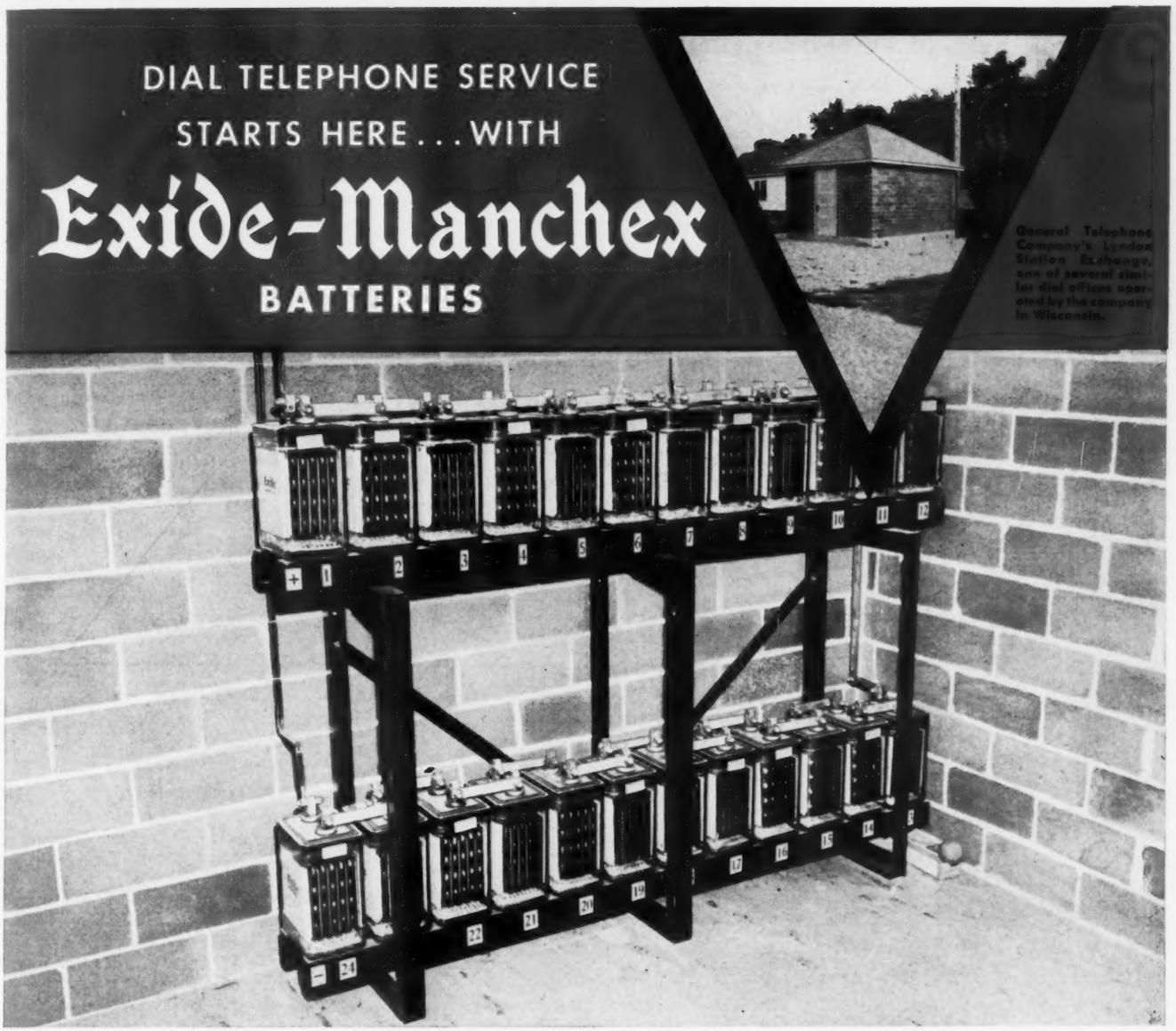

General Telephone Company's Lyndon Station Exchange, one of several similar dial offices operated by the company in Wisconsin.

24-cell DME-11 Exide-Manchex batteries at the Lyndon Station office.

. . . AT THE LYNDON STATION EXCHANGE OF THE GENERAL TELEPHONE COMPANY of Wisconsin. The Lyndon Station Exchange is a typical community dial office serving part of our country's 50,000,000 telephones. At Twin Lakes, Land O'Lakes, Trevor and other places are similar design exchanges . . . with installations of 100 to 500 lines.

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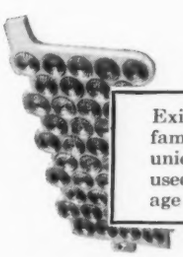

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1888 . . . DEPENDABLE BATTERIES FOR 66 YEARS . . . 1954

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The National Telephone Magazine

Telephone Engineer and Management

JUNE, 1954 **VOL. 58, NUMBER 6**

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FRONT COVER

One Section of group interested in Texas Convention speaker. Among the interested listeners are: D. T. Strickland, Brownwood; W. G. Winters, Houston; Leonard Ruggles, Chicago; Roy Young, Ganado; Bob Singer and Elton Singer, Dimmitt; Leland Mast, Des Plaines, Ill.; Morris Burgon, Tyler; Walter Wright, San Angelo; Marion Clay, Lufkin, and among the ladies, Mrs. Pearl McDonald, Sherman.

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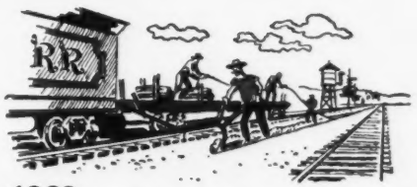
GraybaR TELEPHONE NEWS

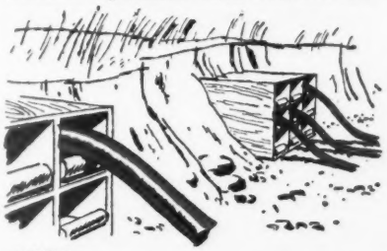
The story of underground installations—

1881 — **Pittsburgh, Pa.** 3 overhead-type Patterson cables were laid in a wooden box and covered with pitch. (Cables consisted of 50 cotton-insulated #26 copper wires in a paraffine-filled lead sheath.)



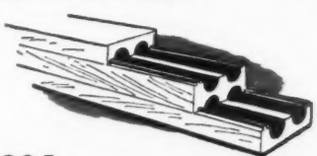
1882 — **Attleboro, Mass.** A locomotive-drawn plow was used to lay 5 miles of ¾" lead pipe containing the first *gutta-percha*-insulated cable (21 wires) — between Attleboro and West Mansfield.

1882 — **Boston, Mass.** The first "drawing in" duct system was constructed of 18' wrought iron boiler tubes pretreated with gas tar and dead oil.



1884 — **Brooklyn, N. Y.** A creosoted wood "drawing in" system was installed. Built of 1½" lumber in 16' sections, it featured rollers to reduce cable-pulling friction.

1886 — Individual wood ducts—"Pump Logs"—were developed.



1888 — Macdonald conduit represented the ultimate in wooden duct systems.

1890 — The first vitrified clay conduit was used.

TODAY Since the beginnings of the telephone industry, Graybar has supplied your electrical needs – striving *always* to keep abreast of the newest developments. Today, you can order – from any of 111 Graybar offices – the most modern underground construction items available anywhere. Orangeburg fibre conduit, single- and multiple-duct clay conduit, mortar bandage material . . . duct rods, conduit rods, cable feeders.

20 tons of PUSH.

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REMEMBER, Graybar offers you convenient "one-order" service on *all* your telephone needs. In addition to construction tools and materials, we distribute telephones, wire, cable and apparatus. See for yourself — you'll save time and paper work by making your next order read *via Graybar.* 252-225

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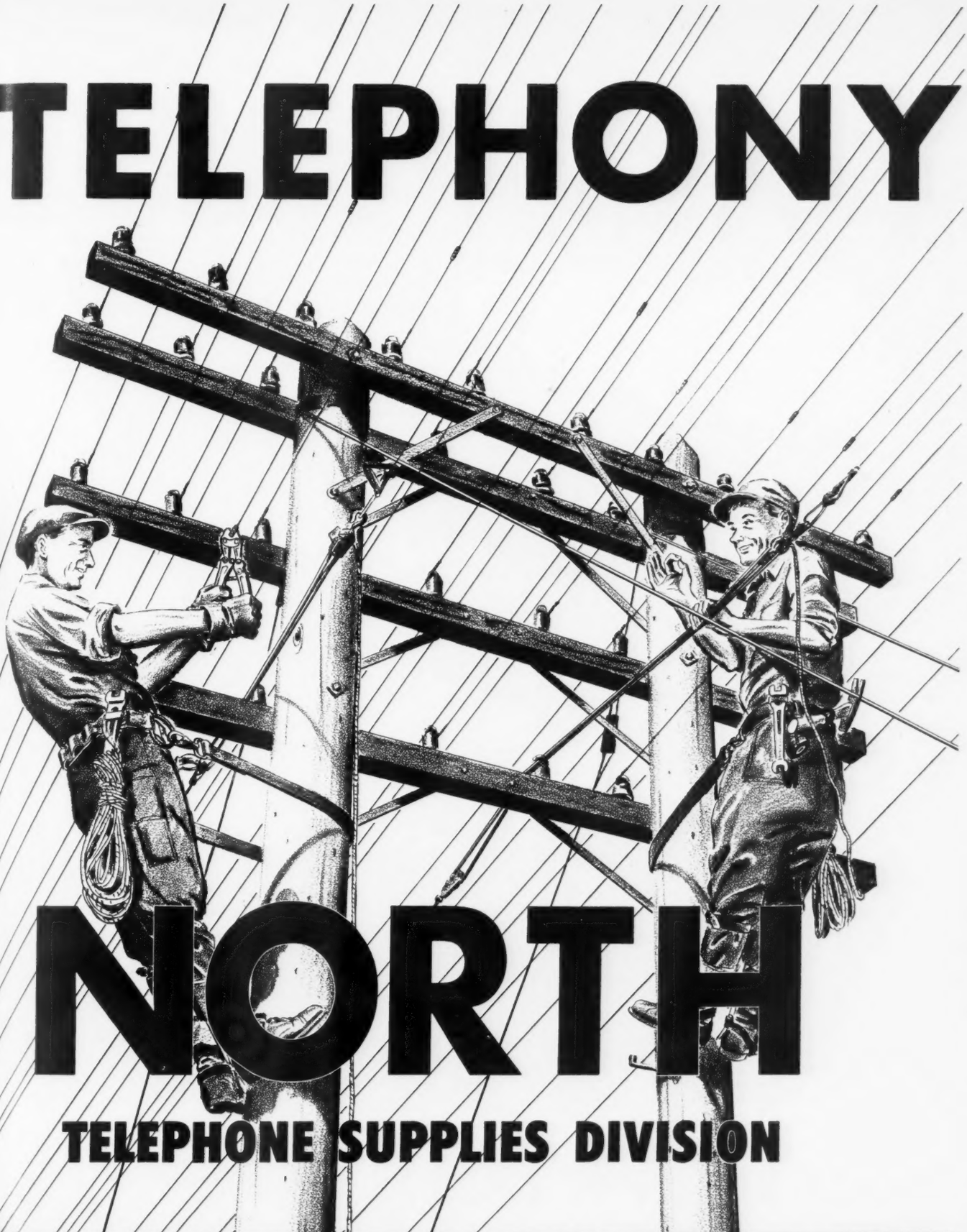

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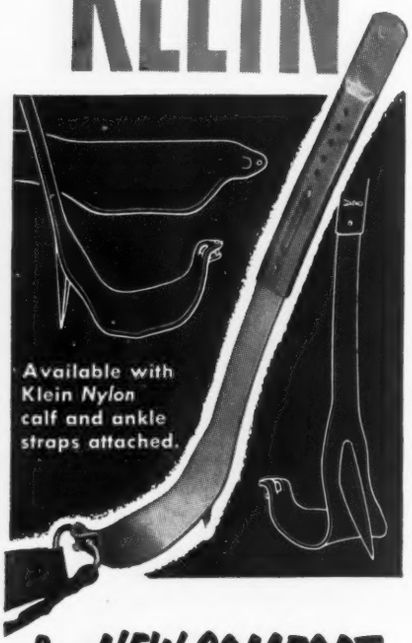

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Keep this precision gauge handy for a safety check on proper spur pitch. Plated steel—packed in durable plastic case.

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Protect the all-important spur of your climbers with this new Klein gaff guard. First quality leather with spring clip.

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Mostly About People— Across The Editor's Desk

Texans Prepare For '55

THOSE LIVE-WIRE *Texas Telephone Association* folks are already preparing for their 1955 annual convention. *W. G. Winters*, president, and *Jack Haley*, the popular Texas secretary arrived in Colorado a week earlier than the USITA Executives Conference and spent that time at the Winters Summer home in the Rockies. No doubt their 1955 convention was thoroughly discussed because both of them were inviting telephone people from all over our nation to join with them in San Antonio next Spring. San Antone is beautiful in March and we expect they will again break all attendance records. There were many Texans in attendance at the Conference at Colorado Springs last month.

F. M. Parsons Dies

THE DEATH of *F. M. (Red) Parsons*, vice president and sales manager of the *Kellogg Switchboard & Supply Co.*, Chicago, saddened the entire Independent telephone industry. *"Red"* spent his entire life in the industry and was known throughout the entire United States. He did yeoman work on committee assignment by the United States Independent Telephone Association for many years. His service to the Independent Telephone Pioneer Association ranged from Committee assignments, as a Director and service as a Vice-President. *"Red" Parsons* was a friend of this writer. He was one of the few people we have known that had that peculiar trait that could be described as being and having character. We and the industry will miss him.

Triples In Ohio

SINCE OUR RETURN from the USITA Spring Conference at Colorado Springs we learn that *George Quatman, Lima, O.*, is celebrating with son *Gus* the arrival of triplets at the Gus Quatman home. George and his large family was in attendance at the Conference and while there greeted another son that now resides in Colorado.

Missouri Independents

GEORGE HEARNE, Kansas City, completed his tenure as president of the Missouri Telephone Association at the meeting in Kansas City late in May. We have had the pleasure of reporting on much of the work accomplished by that association since he was made president. The work of the Small Company Committee and the value it has proven will be among the memories he will treasure in years to come.

The joint meeting of the *Missouri-Kansas* associations at Kansas City is one that is continually growing in importance. The telephone associations of Oregon and Washington on the West Coast and the New Hampshire-Vermont associations in the East have long held joint meetings and found them most successful. Now that Missouri and Kansas has found a joint meeting is feasible and very much worthwhile we are hoping that other state telephone associations might consider teaming up with each other and have a much larger and more important annual gathering. Each state association holds their own business meeting during a joint meeting but meet together to hear a much better and expanded program.

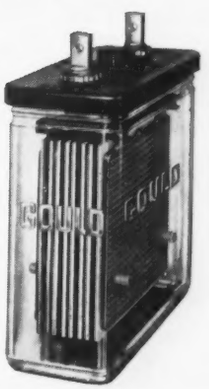
Catalog In The Mail

OUR 1954 COMPOSITE CATALOG & BUYER'S DIRECTORY has been mailed to every reader of this magazine and to every telephone company in the United States, Central and South America. Your copy should be in your hands by the time you read this notice. The publishers of the TELEPHONE ENGINEER magazines were proud to join with the Manufacturers and Suppliers who advertised therein to bring you this copy entirely free of charge to you.

Endless Energy...

THANKS TO BATTERY POWER!

Only with Gould Planté power can you get so much for so little. PURE LEAD positive plates give these batteries an almost endless source of energy for telephone, switchgear, alarm and emergency applications. In fact, they maintain top capacity years longer than ordinary batteries. They're by far the lowest cost standby batteries you can buy. Standardize on Planté.



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Always Use Gould-National Automobile and Truck Batteries

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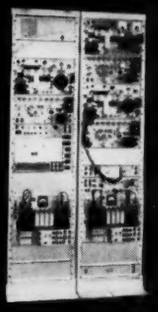
Put your Pole-Line in the Sky... with Telephone Microwave

SAVE MONEY . . . SAVE LABOR . . . SAVE TROUBLE-SHOOTING!

Wouldn't you like to wave your hand and, just by so doing, smooth out mountainous terrain, see your pole-line maintenance costs shrink, take the damage out of stormy weather, and give your subscribers service they want, but you can hardly afford to supply?

This magic is possible with Stromberg-Carlson Telephone Microwave. This is *Radio*—spanning distance with the speed of light, jumping lakes and mountains, impervious to wind and sleet—and providing many simultaneous conversations all on the one circuit.

Utilizing the radio-relay equipment of famed RCA and the voice channeling equipment of Stromberg-Carlson's SETCO division, Telephone Microwave brings the independent operating industry into the push-button age. It will settle many of your most puzzling present problems—it belongs in your future plans. And booklet T-132, yours for the asking, answers all the questions you have in mind. Request a copy today.



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NEWSLETTER
TELEPHONE ENGINEER

Fortnightly TELEPHONE ENGINEER ★ TELEPHONE ENGINEER AND *Management*
ON THE 1st OF EACH MONTH ON THE 15th OF EACH MONTH

Dear Sir: June 15, 1954

SOUTHWESTERN BELL ACQUISITION OF ALEDO, TEX., INDEPENDENT CERTIFIED: – FCC Examiner J. D. Bond has issued initial decision certifying acquisition by Southwestern Bell Tel. Co. of Aledo (Tex.) Tel. Co., small Independent near Fort Worth now serving about 110 rural subscribers. Purchase price of properties is $17,500. Southwestern Bell is to "immediately effect some needed improvements & will forthwith initiate engigeering planning for extensively expanded and technically improved telephone facilities," Mr. Bond pointed out.

$2,500,000 STOCK ISSUE TO FINANCE WEST COAST TEL. CO. BUILDING PROGRAM: – West Coast Tel. Co., with headquarters in Everett, Wash., has sold 100,000 shares of $25 par preferred stock to raise $2,500,000 to help finance its construction program. Company has earmarked total of $6,400,000 for construction during 1954.

PENINSULAR TEL. CO. GETS FCC APPROVAL FOR MICROWAVE TOLL CIRCUITS: – Peninsular Tel. Co., Tampa, Fla., was granted authority by FCC last month for additional microwave facilities to provide additional telephone toll circuits between Tampa & Clearwater, Fla. Peninsular had pointed out that toll loads at Clearwater have increased from 345,446 during 1947 to 772,631 calls during 1953 & that microwave facilities would avoid need for constructing wire lines "circuitously" around Tampa Bay area.

ILLINOIS FIRM GETS $1,970,000 REA ALLOCATION: – Eastern Illinois Tel. Co., Rantoul, Ill., which serves 4128 subscribers, has been allocated one of largest Rural Electrification Administration farm telephone loans since program began – $1,970,000.

Loan funds will be used to build plant to serve additional 2055 subscribers. In addition to rebuilding 560 of existing 593 miles of line, & adding 10 miles of new line, company will convert its 9 central offices to dial operation, & add new dial office.

Meanwhile, newly organized Minnesota co-op, Federated Tel. Co-Op., Benson, which plans to serve 2046 subscribers, was allocated $1,239,000 by REA. Total subscribers includes 205 who will receive switching service from the Northwestern Bell Tel. Co.

Co-op will acquire 5 small telephone properties, & facilities of 20 farmer-owned service station companies, now serving total of 1179 rural subscribers. It will rebuild 508 miles of existing line, construct 528 miles of new line, & install 6 dial central offices.

B. C. TEL. CO. PLANS GRADUAL OVERHAUL OF ACQUIRED TERRITORY: – W. S. Pipes, vice president & general manager of British Columbia Tel. Co., announced last month that company plans to install hundreds of tele-

phones & large quantity of switchboard facilities within next several months in various exchanges recently taken over from Dominion government as 1st major move to increase local telephone facilities in acquired territory.

Meanwhile, company has increased long distance facilities between Vancouver & central British Columbia – with more circuits to be added soon – & is providing local service for limited number of waiting applicants where equipment is on hand at those points.

USITA NAMES RADIO SERVICE SUBCOMMITTEE ON CARRIER COORDINATION: — A subcommittee of the US Independent Telephone Association's Radio Service Committee to deal with frequency coordination of telephone carrier systems has been appointed by USITA, & is headed by C. H. McLean, who is also chairman of the Radio Service Committee. The subcommittee, working particularly closely with telephone manufacturers, will make recommendations designed to assist in bringing about compatibility of the various carrier systems employed in telephony, so that they will work in harmony & not interfere with each other.

Problem of carrier coordination was discussed in a conference of representatives of Rural Electrification Administration, USITA, Bell System, & manufacturers in April. Other members of the USITA subcommittee are D. S. Seitz, York, Pa., and C. W. Frank, of Chicago.

GROWTH RATE OF BELL SYSTEM TOLL CALLS IN 1st QUARTER WAS 0.2%: - Another indication of decline in rate of growth of long-distance telephone conversations was brought out recently, in quarterly statistical report on nation's telephone industry showing that average daily toll conversations over Bell System facilities in 1st quarter of 1954 amounted to 6,108,000. Figure compares with 6,095,000 in 1st 3 months of last year, or a rise of 0.2%. By comparison, annual growth rates in 1953 & 1952 over preceding full years were 3% and 2%, respectively.

Metropolitan area service, however, has resulted in reclassification of many calls from toll to local. For telephone industry as whole, growth rate was even smaller – 6,390,000 average daily conversations this year, against 6,375,000 in 1st quarter of 1953.

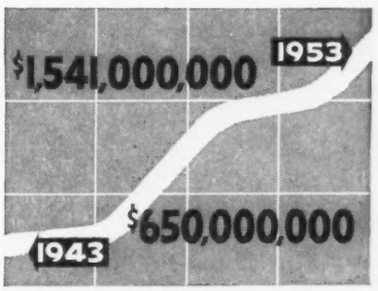
Statistical report, issued by American Tel. & Tel. Co., showed 50,850,-000 telephones in service in United States at close of quarter. Of total, 41,756,000 were operated by Bell System associated companies; 1,330,000 were served by Southern New England & Cincinnati & Suburban Bell Tel. Cos., in which AT&T holds minority interests; and 337,000 were listed as principally stations on rural or farmer lines connecting directly with Bell System. There were 7,427,000 Independent telephones shown.

HELPFUL TECHNICAL LITERATURE: – New, illustrated manual titled, "Manual of Design & Welding Engineering" is available from Eutectic Welding Alloys Corp., 40-40 172 St., Flushing 58, N.Y...."Hoist Classification Chart" giving valuable data on hoists is available from Hydraulic Hoist & Steel Dump Body Mfg's. Assoc., 1740 "K" St., Washington 6, D. C. ...

Ray W. Smith, Editor

Telephone number with a healthy ring!

5,100 is the number of Independent Telephone Companies now serving the U.S.



GROSS PLANT INVESTMENT
of Independent Telephone Companies

That's right. There are 5,100 Independent Telephone Companies providing service to *two-thirds* the area of the U.S. Here is a 1½ billion dollar industry—vigorous, growing, double its size of 10 years ago—adding to its present nine million telephones by nearly 1,500 more each day! And the thousands of cities, towns and villages where Independents are growing are located in the heart of this country's most rapidly developing areas.

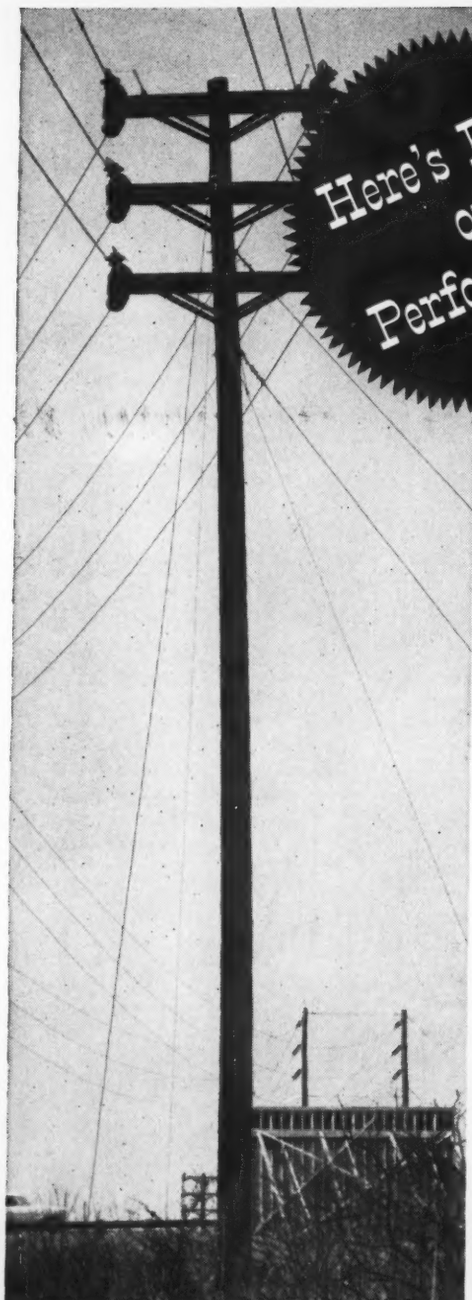
Along wide frontiers of industrial and agricultural expansion, America's Independent Telephone Companies are meeting each new challenge with resourcefulness and enterprise...building a bigger, stronger telephone industry.

USITA

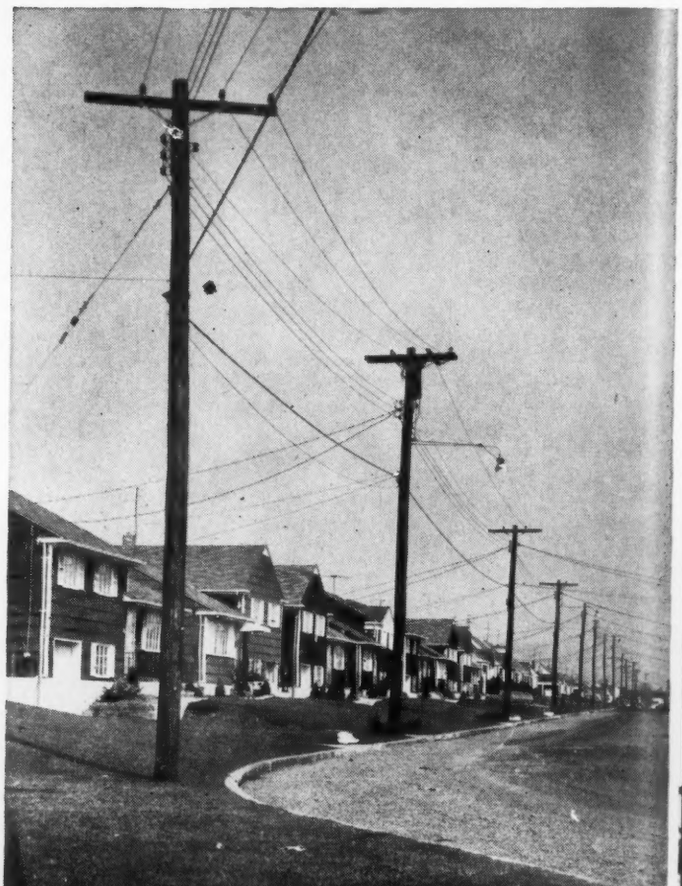
• *Telephone instrument in photograph above manufactured by Leich Electric Company, Genoa, Ill.*

United States Independent Telephone Association

Munsey Building : Washington, D. C.



Since 1932, has used only and annual



THIS 65-FOOT pressure-creosoted pole carries transmission lines between the Clark and Sewaren substations of Public Service Electric and Gas Company.

PUBLIC SERVICE also uses pressure-creosoted poles for its residential distribution lines. These homes, all heavy consumers of electricity, are located in Linden, N. J.

Public Service Electric and Gas pressure-creosoted poles . . . replacements run less than 1%

• Public Service Electric and Gas Company — supplying seven billion kilowatt-hours to over 225 municipalities in New Jersey—has found pressure-creosoted poles a big economy factor.

From its 90-foot heavy-duty transmission line poles to its 35-foot distribution line poles, Public Service, since 1932, has used nothing but pressure-creosoted Southern pine poles. And nearly all of the pre-1932 poles have had Creosote treatment.

George McCaskie, a Public Service engineer specializing in wood, says, "We have eliminated our major problem—decay at the ground line—through the use of pressure-creosoted poles. Creosote's deep penetration also prevents decay above the ground line.

"Until 1945," Mr. McCaskie continues, "we had a four-year inspection cycle. But pressure-creosoting made it possible to extend this cycle to six years."

Public Service specifies eight pounds retention on poles 40 feet and less in length and ten pounds on poles 45 feet and over.

This is another example of Creosote's ability to lengthen pole life and keep replacements low. It's more proof of performance.

For best results from Creosote treatment, be sure your treating plant uses USS Creosote, a uniform product of United States Steel's tar distilling operations. For complete information, contact our nearest Coal Chemical sales office or write directly to United States Steel Corporation, 525 William Penn Place, Pittsburgh 30, Pa.

PRESSURE-CREOSOTED pole being set after the auger of the earth borer is withdrawn.

BACK FILLING and tamping a new pressure-creosoted pole in Cranford, N. J.

SAMPLE OF WOOD being taken from a pressure-creosoted pole during inspection.

Employes of Wautoma and Westfield Exchanges of the Community Telephone Co. of Wisc. recently assembled at Silvercryst Resort, Wautoma for a dinner and service pin awards. Special gold pins, showing the name of the company, the year for each five years of service, and set with a small blue enameled telephone were awarded to many that were in attendance. Employes receiving service pin awards have a number following their name indicating their service pin award. Front Row (l. to r.): LILA PATTERSON (5), EVELYN KNUTSON (10), JANETTE KREUGER (15), FRANCES TESKA (5) and EDITH GREENE (5), all of Wautoma, Wisc. Middle Row (L. to R.): MILDA BOHN of Westfield, LORETTA FITZGERALD of Wautoma, LEONA GROSKREUTZ, SHIRLEY HINTZ and HERTHA SCHWANKE of Westfield, DOROTHY KENGOTT and PEARL WEBER of Wautoma, THERESA LEMKE and DOLORES KEMNITZ of Westfield. Back Row (L. to R.): HERBERT WEBER (10), ARTHUR BURSACK and WILLIAM NORK of Wautoma,[3] LLOYD LIPPERT (10) of Westfield, DONALD PARSONS, district manager of Walworth, B. F. STALTER (20), general plant superintendent, and B. H. PIEPMEIER (25), General Manager.

Industry News Briefs

West Coast Tel. Co. Gains 7758 Stations in 1953

THE WEST COAST Telephone Co., with headquarters in Everett, Wash., invested $3,775,000 in plant during 1953 and, continuing its expansion and improvement program to meet demands for service, it will spend an additional $6,400,000 during the current year, it was pointed out in the annual report sent to stockholders by President C. H. Loveland.

A net gain in company-owned stations last year of 7758 brought the year-end total to 109,187, but there were still 4804 unfilled applications. The program being continued this year has a goal of conversions to dial operation of 72 percent of the company's stations.

The company had operating revenues last year of $9,402,821, compared with $7,842,136 in 1952; operating expenses of $6,988,306 and $6,240,444 for the two years; and net income from operations last year of $2,434,515, against $1,601,692 in the previous 12 months.

General Of Illinois Reports Gains In '53

CONTINUING its expansion and improvement program during 1953, the General Telephone Co. of Illinois spent $5,430,757 on plant, President Burton W. Saunders stated last month in his annual report.

The company completed 10 new buildings to house central office equipment and converted nine exchanges with a total of 12,086 telephones to dial. At the end of 1953, the company was serving 176,800 telephones, a 9% increase over the 162,700 at the end of the previous year. Total operating revenues for 1953 were $11,586,000 against $9,881,000 for 1952. Net earnings were $1,928,000, compared with $1,296,000 for 1952.

MIT Summer Program Will Discuss Transistors

TRANSISTORS and Their Applications will be the subject of a special summer program offered at the Massachusetts Institute of Technology from July 19 through July 30 during the 1954 Summer Session.

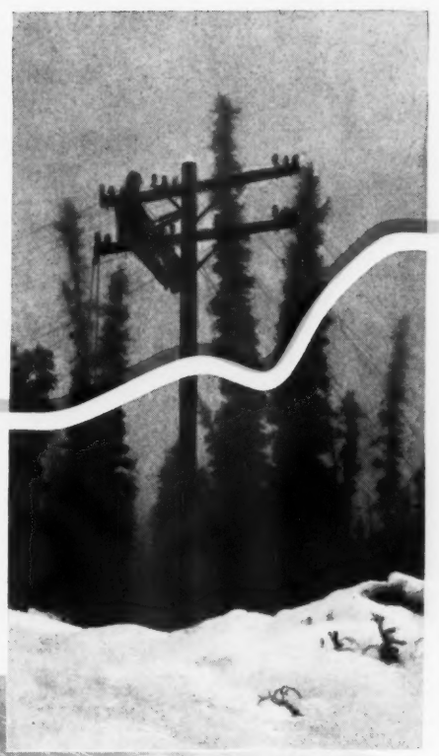
Professor Ernest H. Huntress, director of M.I.T.'s Summer Session,

Another Link **in the**

Vital Telephone Network for Alaska--

—and again it's

Copperweld TRADE MARK **Line Wire**



The new 340-mile telephone line connecting Anchorage and Tok Junction, Alaska, represents an important addition to the Alaska Communications System—the long lines telephone network which is so vital to our national defense.

For this essential open wire carrier system, Copperweld* Telephone Line Wire was used. One of the factors which led to its selection was the outstanding performance of Copperweld on the 2,000 miles of pole line built along the Alaska Highway in 1943. It has proved its ability to take the terrific punishment of Arctic storms without service interruptions. Remember—Copperweld is the only conductor that combines the strength of steel with the conductivity and long life of copper.

On millions of miles of overhead lines—all over the world—Copperweld Line Wire is providing dependable, trouble-free performance at lowest cost per year. Use Copperweld on all your installations—it will do the same for you.

*Trade Mark

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WIRE AND CABLE DIVISION
Glassport, Pa.
For Export: COPPERWELD STEEL INTERNATIONAL COMPANY, New York

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LINE WIRE

GRIP-FLEX INSULATOR TIES are used with Copperweld Line Wire on the Alaskan Telephone Network.

SOLD BY LEADING DISTRIBUTORS

The Only High-Strength Conductor Suitable For Carrier Systems

said in announcing the program: "The variety of transistor types available today presents a considerable evaluation problem for the engineer. Our effort will be, therefore, to outline the advantages and limitations of several important types of transistors in the context of their typical circuit applications."

Laboratory sessions demonstrating both physical principles and circuit applications of the transistor will supplement each lecture topic, according to Dr. Richard B. Adler, Assistant Professor of Electrical Communications, who will direct the program.

The early part of the program will explain the physical principles of transistor operation starting from familiar concepts. Next lectures will be on the general performance characteristics and equivalent circuits, followed by material on specific circuit applications. An important aim of the program will be to help engineers evaluate transistors in relation to the electronic circuit problems, Professor Adler says.

Academic credit will not be offered. Full details and application blanks may be obtained from the Summer Session Office, Room 7-103, M.I.T., Cambridge 39.

John McKinzie Retires from Lincoln T. & T.

SEVERAL CHANGES IN executive and managerial positions of the Lincoln (Neb.) Telephone & Telegraph Co. have been announced by Merle M. Hale, vice-president.

John A. McKinzie, general plant superintendent, retired May 1 after 39 years with the company and has been succeeded by George P. Barney, formerly assistant to the general plant superintendent. Max C. Walker, formerly eastern district manager, succeeded Mr. Barney; and Paul H. Henson, formerly transmission and protection engineer, has been named eastern district manager.

GEORGE P. BARNEY has succeeded John McKinzie as general plant superintendent of the Lincoln (Neb.) Tel. & Tel. Co.

After working with the telegraph construction department of the Burlington for eight years, Mr. McKinzie joined the Lincoln Telephone & Telegraph Co. in December, 1915, as a clerk in the general plant office. He then served on the staff of the general plant superintendent in various outside plant assignments and in

JOHN A. McKINZIE, general plant superintendent of the Lincoln (Neb.) Tel. & Tel. Co., retired May 1.

MAX C. WALKER has been named assistant to the general plant superintendent of Lincoln T. & T. Co.

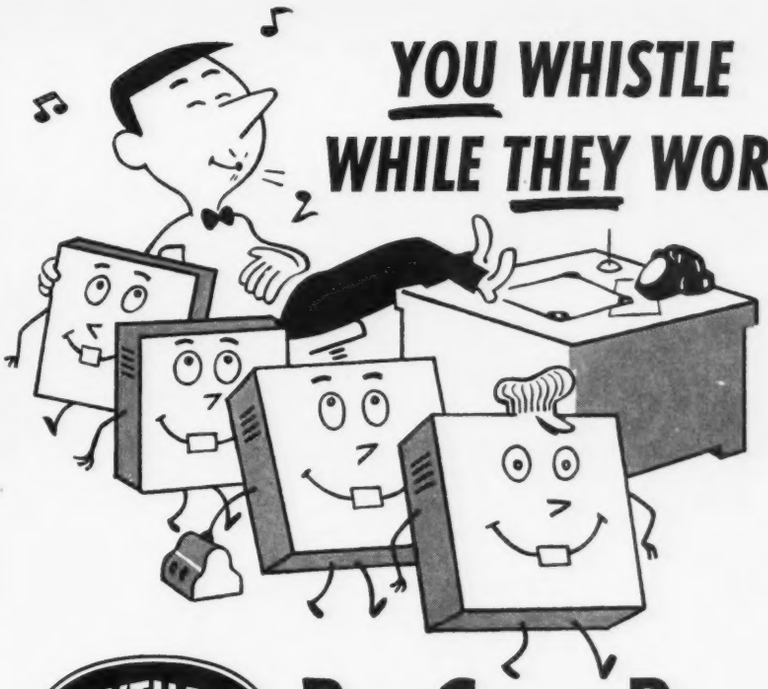
PAUL H. HENSON, newly appointed Eastern district manager of the Lincoln (Neb.) Tel. & Tel. Co.

1918 became plant statistician. In 1921 he was appointed chief clerk in the construction department and two years later was advanced to supervisor of supplies, having charge of the purchase of all materials and equipment used by the company. He was named eastern district manager in 1929 and advanced to general plant superintendent in 1951.

Active for many years in the United States Independent Telephone Association, he is a member of its Plant Committee and is a familiar figure on programs of the U.S.I.T.A. and state telephone association. He is also a member of the Frank H. Woods chapter of the Independent Telephone Pioneer Association, Masonic Lodge, Scottish Rite, Shrine and the Lincoln Chamber of Commerce.

Mr. Barney also started with the company in 1915 when he was employed as a groundman at Lincoln. Later that year he was transferred to the supply department as a clerk and then became general storekeeper and shopman. In 1919 he was transferred to the Lincoln plant department as a combinationman and in 1925 became office foreman at the company's University Place exchange. He was appointed chief clerk in 1939 and became assistant to the general plant superintendent in 1941. He is a member of the Masonic Lodge and the Frank H. Woods chapter of the Independent Telephone Pioneer Association.

Mr. Walker began his telephone career in Lincoln as an apprentice



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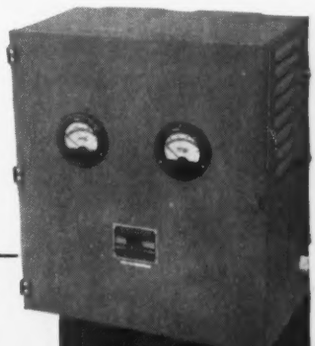
Striking proof of dependability is shown in the results of tests made on a RectiChargeR after 15 years of continuous service. Engineers found it as good as ever — not the slightest impairment of electrical qualities — no mechanical deterioration whatever.

In fact there's no reason it couldn't go on for many more years giving the same trouble-free service.

Dependability counts heavily in the Telephone Industry — one reason why Raytheon RectiChargeRs are so widely used.



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*Reg. U. S. Pat. Off.

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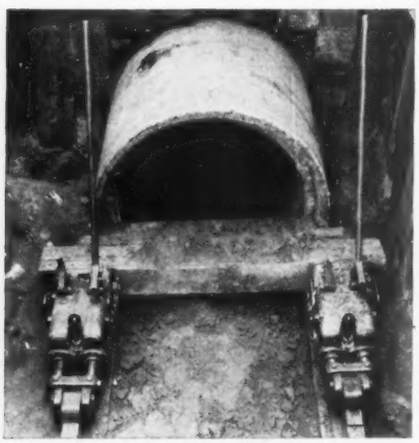

GREENLEE

Write today for descriptive literature, Greenlee Tool Co., 2006 Columbia Avenue, Rockford, Illinois, U.S.A.

switchman in September, 1926. However, most of his service with the company has been spent at Hastings. He moved there in 1929 as a switchboardman and became wire chief in 1939. In 1948 he returned to Lincoln as central district plant manager and was appointed eastern district manager in 1952. Mr. Walker is president of the Frank H. Woods chapter of the Independent Telephone Pioneer Association, a member of the Masonic Lodge, B.P.O. Elks and the Lincoln Chamber of Commerce.

Mr. Henson entered the telephone business as a warehouseman at Lincoln in 1942. In 1943 he entered military service and was a first Lieutenant with the 14th Air Force in the Pacific area. He returned to the company in 1946 as a warehouseman and became an advanced clerk in the general traffic department later that year. He was named equipment engineer in February 1948 and in July 1948 became junior engineer in the engineering department. He was appointed transmission and protection engineer in 1949. A graduate of the University of Nebraska with a Master of Science degree, he is a member of the Masonic Lodge, Society of Professional Engineers, American Legion and Lincoln Chamber of Commerce.

H. W. Meyer Joins Ohio Consolidated

R. N. COLE, president of Ohio Consolidated Telephone Co., Portsmouth, Ohio, has announced the appointment of Herbert W. Meyer as general commercial superintendent of the company. Mr. Meyer succeeds J. R. Yeager, who resigned to accept a similar position in Lima, Ohio.

Mr. Meyer has been with the Home Telephone & Telegraph Company, Fort Wayne, Ind., for the past 15 years, serving in various capacities and has been commercial supervisor of the Fort Wayne firm for the past four years.

Mr. Cole said that Mr. Meyer, commercial superintendent, William T. Reichel, plant superintendent, and G. T. (Tom) Winn, traffic superintendent, complete the staff of A. C. Purpura, general manager, in charge of the day-to-day operations of the company's 39 exchanges.

"Herb" Meyer is a past president of the Fort Wayne Junior Chamber

HERBERT W. MEYER has been named general commercial superintendent of the Ohio Consolidated Telephone Co., Portsmouth.

of Commerce and is a past secretary of the Indiana State Jaycee group. He has been a member of the board of directors of the Fort Wayne Lutheran Choral Society for the past five years and is the organization's immediate past president.

During 1952 he served as chairman of the Fire Prevention Committee of the Fort Wayne Chamber of Commerce and is currently serving on that committee as well as on the Chamber's Membership Committee. He has been active in the fund raising campaigns of the Fort Wayne Community Chest, Red Cross, Parkview Memorial Hospital and the United Fund.

Mr. Meyer also is active in church affairs, being a member of the Board for Christian Education and the Council of the Bethlehem Lutheran Church. In addition, he is one of the congregation's representatives on the Lutheran Hospital Association Board of Control.

Diplock Elected Director Of British Columbia Tel. Co.

CYRIL B. DIPLOCK, British Columbia Telephone Co. vice-president, who has been with the company since 1913, was elected a director at the 62nd annual meeting of shareholders recently. He replaces the late George H. Barnard, Q.C., of Victoria, who died January 13.

A long-time resident of North Vancouver, Mr. Diplock started his telephone career at the bottom of the ladder, working his way up to vice-president through a series of executive positions including that of gen-

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weather proof—
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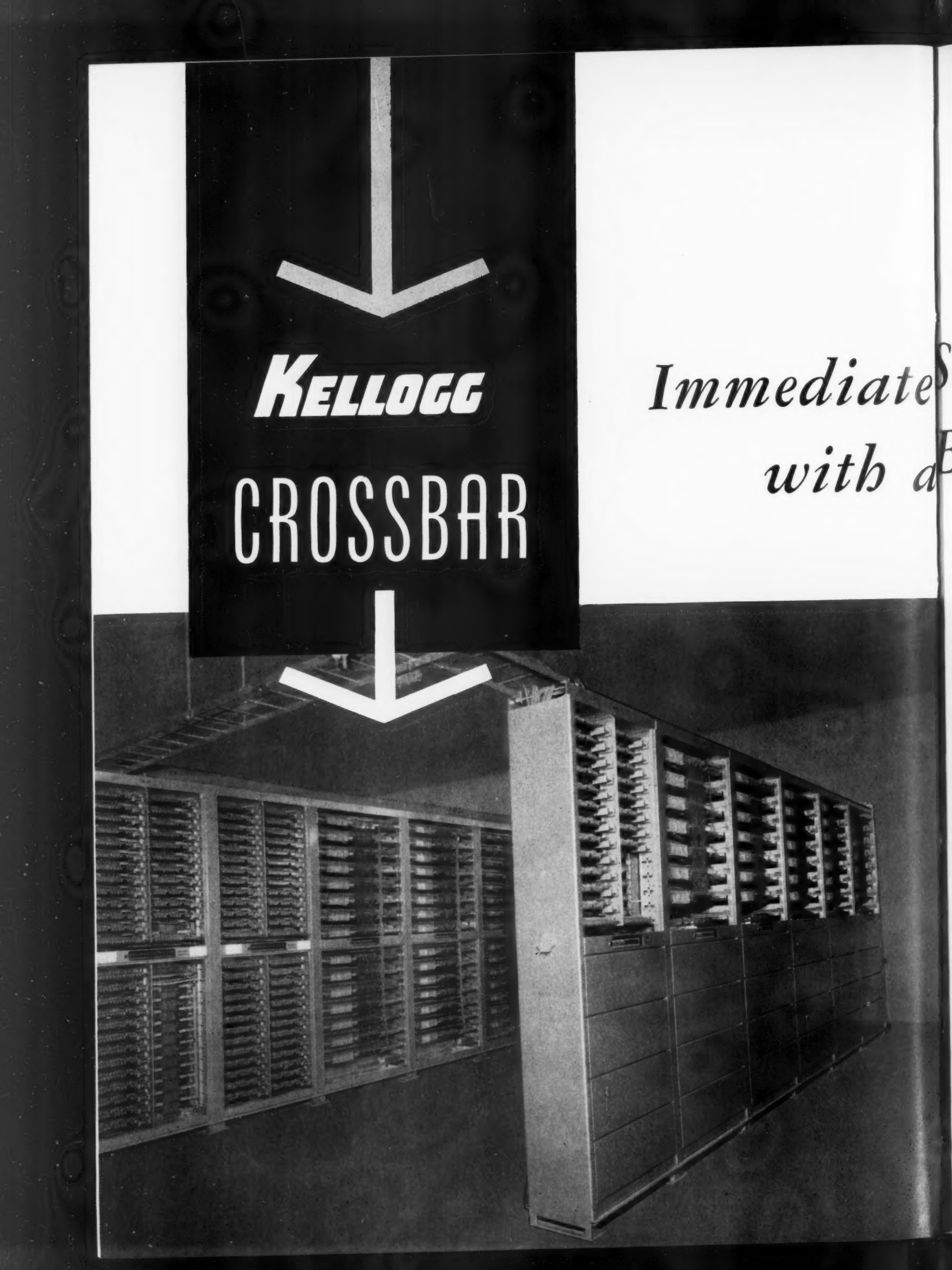
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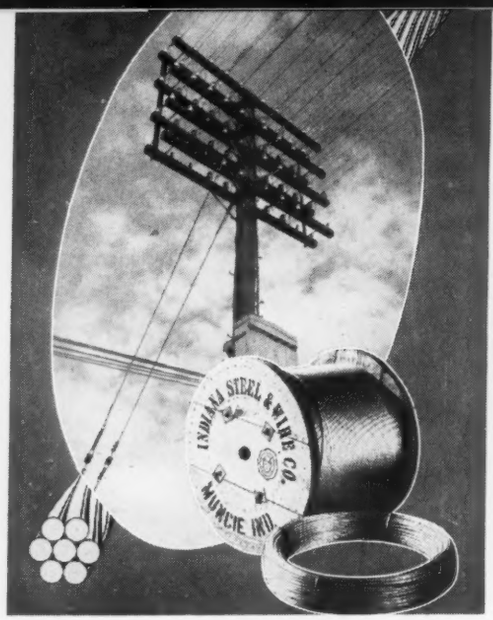

The Time-Tested Steel Strand. A ductile, adherent zinc coating applied by the famous Crapo Galvanizing Process, provides lasting protection against corrosion in INDIANA STEEL & WIRE CO. Crapo Steel Strand. Minimum maintenance expense.

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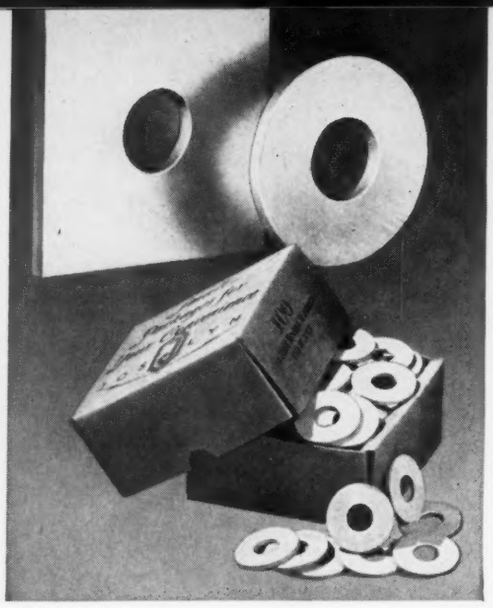

Complete Line of Hardware to meet all outside telephone plant requirements. Joslyn's convenient package of small hardware—like round washers shown above—promotes better "housekeeping" in the storeroom and on the line truck. JOSLYN.

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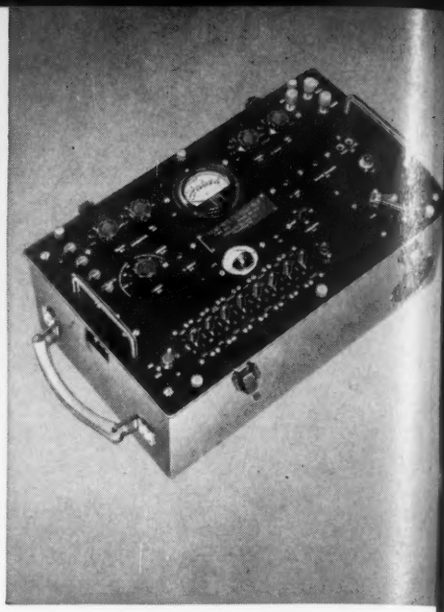

The No 693 Transmission Test Set measures al electrical characteristics of telephone line and associated equipment—used by repair men in locating defective components in a telephone system. SHALLCROSS MANUFACTURING COMPANY.

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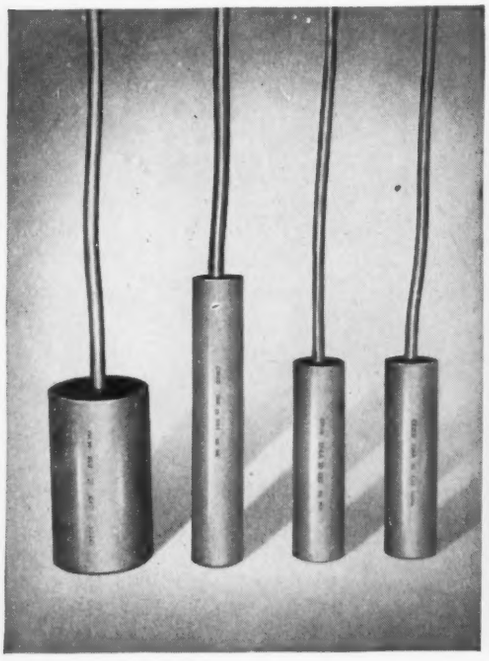
Application of Loading Coils on telephone circuits, reduces loss to ⅓ or ¼ the non-loaded value—coils shown are used on 2-wire telephone circuits in non-quadded paper insulated or plastic cable. COMMUNICATION EQUIPMENT & ENGINEERING CO.

Standard in the Industry! Wiebel's Insulator Pins made of A-1 Grade, hard, close-grained Locust Wood is your guarantee against moisture penetration and decay. No shrinkage or warping. Adequate stocks in all Kellogg warehouses. L. H. WIEBEL, INC.



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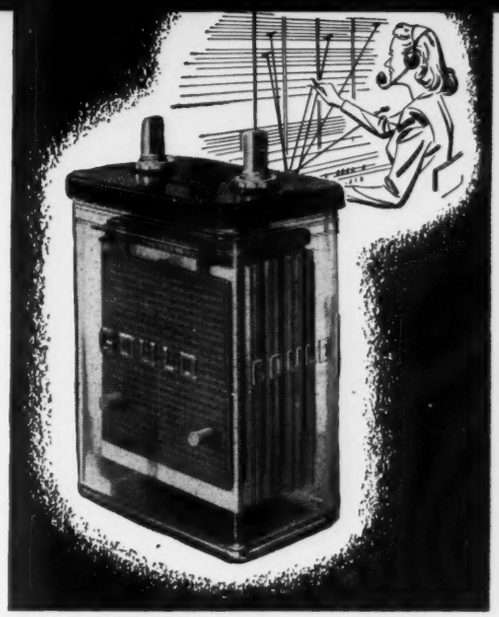

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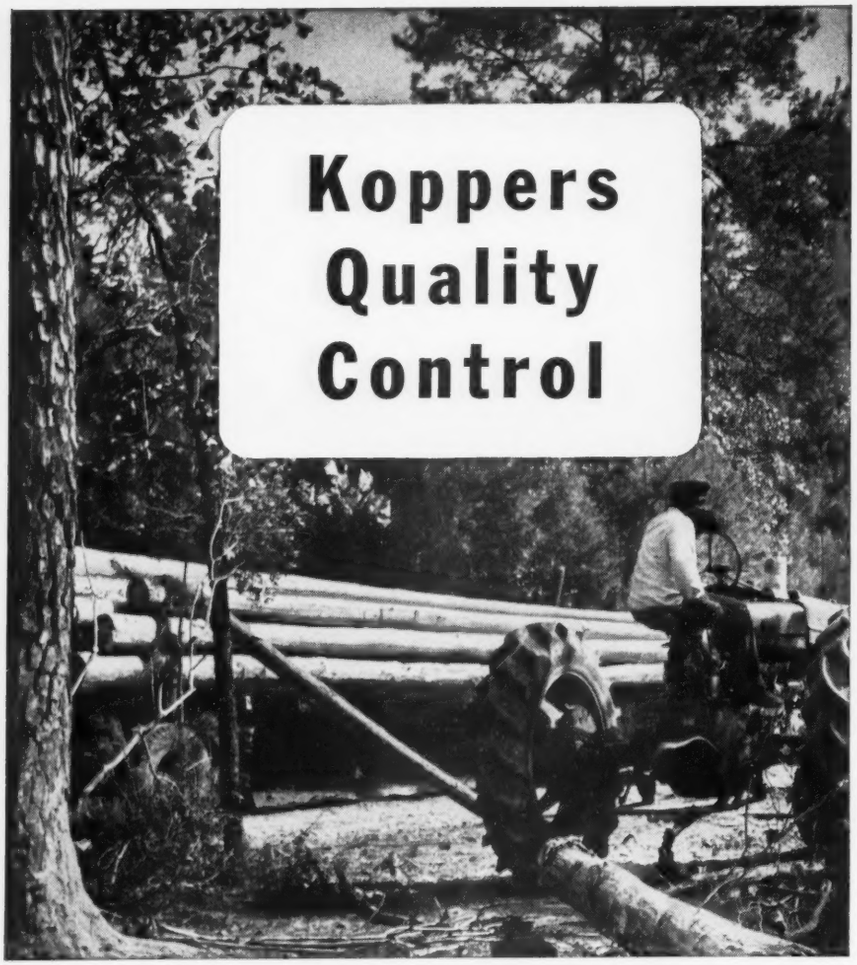

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KOPPERS PRESSURE-CREOSOTED POLES are made from the finest timber obtainable. Koppers men *know* good timber. And these experts never approve any purchase unless the timber meets the highest standards of strength and straightness.

But that's just the beginning of quality control. Every other step—rossing, stacking, seasoning, framing, pressure-creosoting—is under the supervision of skilled personnel. And the most modern machinery and pressure-treating equipment are used when preparing Koppers Poles for customers.

As a result of strict quality control, from tree to finished product, Koppers Poles remain sound and strong through the years. This long service life makes line operation more efficient and more economical. Write for prices and further information on Koppers Poles.

KOPPERS COMPANY, INC.
Wood Preserving Division · Pittsburgh 19, Pennsylvania

KOPPERS® PRESSURE-CREOSOTED POLES

CYRIL B. DIPLOCK, vice president of the British Columbia Telephone Co. has been elected a director of the company.

eral manager. He served overseas in World War I, was wounded twice and was awarded the Military Medal.

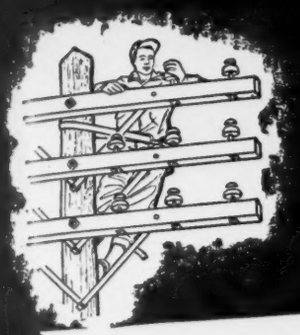
He is a member of the executive council of the Trans-Canada Telephone Association and of the Telephone Association of Canada. He served as president of the latter organization during 1951-52. He is a member of the Vancouver Canadian Club and Vancouver Board of Trade and a member of the executive of the Greater Vancouver Metropolitan Industrial Development Commission, serving on the finance committee.

The following directors were re-elected: Harry M. Boyce, Verne E. Chaney, Gordon Farrell, Theodore S. Club and Vancouver Board of Trade Hough, Cyrus H. McLean, Frank S. Spring, Arthur S. Torrey and Col. The Hon. Clarence Wallace, C.B.E., lieutenant-governor of B. C.

At a meeting of directors following the annual meeting, the following officers were elected: Frank S. Spring, chairman; Gordon Farrell, president; James Hamilton, vice-president; Cyril B. Diplock, vice-president; Harry M. Boyce, vice-president and treasurer; Gilbert A. Kennedy, vice-president and comptroller; Winfield S. Pipes, vice-president and general manager, and Ronald W. J. Angus, secretary.

Rider College Offering Course For Blind Operators

RIDER COLLEGE, Trenton, N. J., is probably the first institution of higher education in the United States to offer a regular course of instruction for blind telephone switchboard op-



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ITEMS SOME COMPANIES ARE USING TO MAKE
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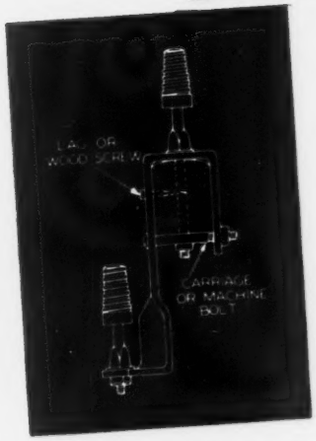
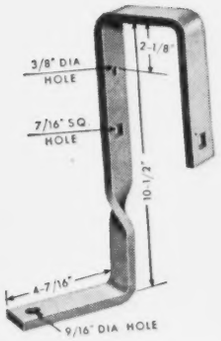
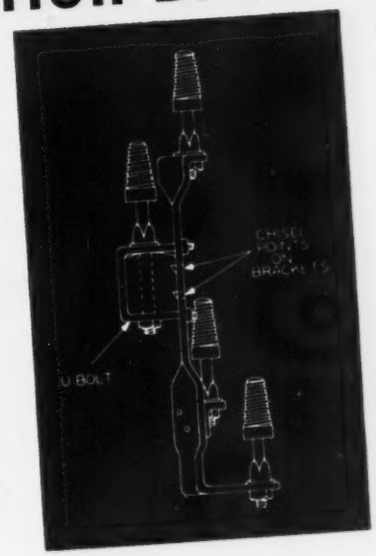


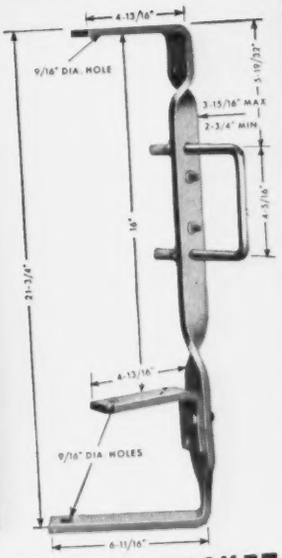


SINGLE-POINT DROP TYPE BRACKET

Cat. No. 331497X6

One-piece single-point unit for transposing two wires on a single circuit. Usually used where pull is not over 10 feet. Made of 1½" x ⅜" flat steel, hot dip galvanized.

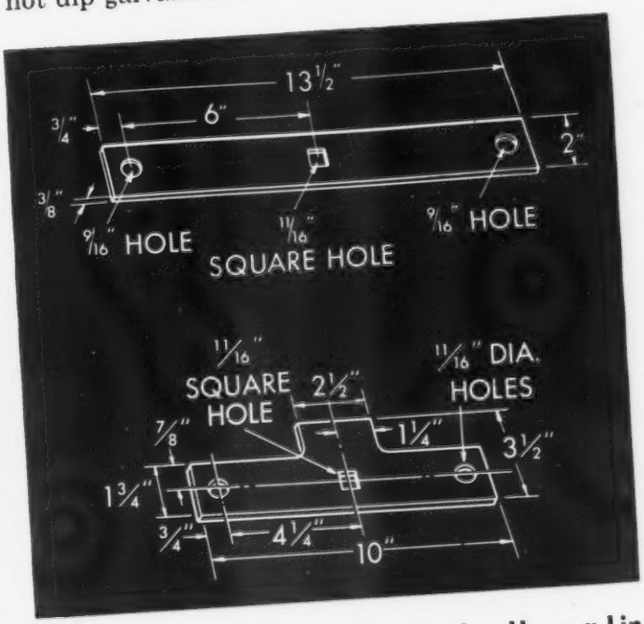




3-POINT PHANTOM CIRCUIT BRACKET

Cat. No. 330495X1

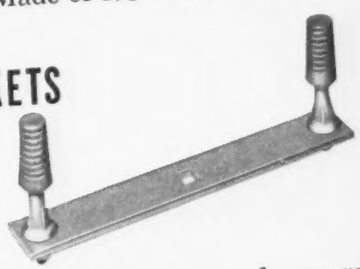
One-piece three-point bracket for phantom transpositions on separate insulators. Used where pull is not over 10 feet. Made of 1½" x ⅜" flat steel, hot dip galvanized.



TANDEM BRACKETS

TYPE B.

Cat. No. 330051A1



Of ⅜" x 2" steel, for straight sections and corners where pull is less than 15 feet.

TYPE C. Cat. No. 330071A1

Of ½"-thick steel, for angles, where the extra section gives additional support on inside of the angle. For use where pull is at least 15 feet but not over 50 feet.

Do You Have a Line Construction Problem?

These are just a few of thousands of L-M line construction specialties. If you have a line construction problem, let us know. We may have standard or special items in stock that will solve it. Ask the North Electric or Kellogg representative, or the L-M Field Engineer. Or write Line Material Company, Milwaukee 1, Wisconsin (a McGraw Electric Company Division).

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Line Construction Materials

Sold for L-M
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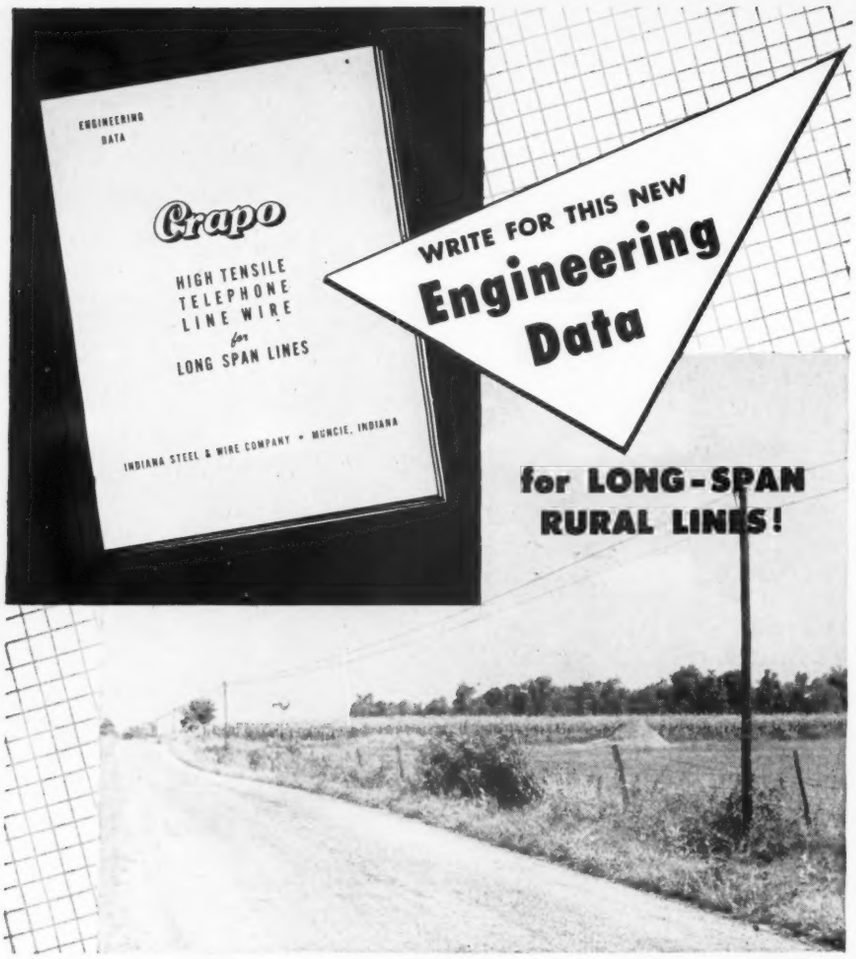
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HIGH TENSILE TELEPHONE LINE WIRE for LONG SPAN LINES
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WRITE FOR THIS NEW
Engineering Data
for LONG-SPAN RURAL LINES!

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TELEPHONE LINE WIRE FOR LOWER OVERALL COST

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For Extra Long Spans

● FEWER pole structures are required where *Crapo* High-Tensile Line Wire is used in building rural telephone lines. This means substantial savings in time, labor and material. There are fewer holes to dig and poles to set, less material to be handled, installed and connected — all of which contribute to lower overall construction costs.

Crapo High-Tensile Line Wire also makes for lower maintenance costs. Its superior tensile strength offers increased resistance to ice and wind loads . . . provides a greater margin of safety. Heavy galvanized coatings assure dependable, lasting protection.

For maximum savings in the construction and maintenance of rural telephone lines, specify the *Crapo* Telephone Wire which best fits your requirements.

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INDIANA

STEEL AND WIRE CO., MUNCIE, IND.

erators, it was reported last month. The project is a joint experiment of the school and the New Jersey Commission for the Blind, and the switchboard was installed by the New Jersey Bell Telephone Co. The course lasts three months.

The Braille switchboard used by blind telephone operators was developed about 14 years ago by the Bell Telephone Laboratories. About 50 have been produced during the intervening years, provided primarily to organizations for the blind.

Harry Mahoney Joins York (Pa.) Tel. Co.

A 49-YEAR veteran of the Independent telephone field, Harry P. Mahoney, has been elected vice president and general manager of the York (Pa.) Telephone & Telegraph Co. He has assumed the duties of general manager formerly held by George B. Rudy, Jr., who continues as president of the company.

Mr. Mahoney, whose telephone career began in 1905, has been Chief Engineer of the Associated Telephone & Telegraph Co. and consulting engineer for the Automatic Electric Co. and other affiliates in the Automatic group since 1936, until assuming his new post.

Ohio Consolidated Installs Its 50,000th Telephone

THE 50,000TH TELEPHONE mark was passed recently by the Ohio Consolidated Telephone Co. R. N. Cole, president of the company, reports that service over the 50,000th telephone was established in the rural home of Mr. and Mrs. Emmet Timmons, Rural Route 1, Ashville, Ohio. Ashville passed the 900 telephone mark the first of this year.

Mr. Cole said the Ashville exchange was converted from manual to automatic operation in December, 1953.

Five other manually operated exchanges are scheduled for conversion this year: Flushing in the Cadiz District, Laurelville and Williamsport in the Circleville District, New Bremen in the St. Marys District, and Leesburg in the Wilmington-Greenfield District.

Since 1945, after the close of the last war and up to the present time, Mr. Cole said his company has placed 15,000 additional telephones in service in the 39 cities and towns in which they operate in Ohio. Gross

Please Turn To Page 30

More jobs per day

Service-Utility body lockers are triple-sealed against dirt and moisture. Doors are fitted with recessed handles, slam-action catches, and keyed-alike cylindrical locks for full protection. Ladder racks, vise brackets, and pipe supports are also available, providing everything needed for every type of work.

When you put INTERNATIONAL Trucks with Service-Utility bodies into operation in installation or service call work, you get more work done per day.

The Service-Utility body provides all-steel lockers, with compartments of varying sizes, for orderly storage of all the tools, parts, and equipment needed to do a number of different jobs. Thus, there is no costly labor-time wasted in job-to-shop trips for needed or forgetten items.

And INTERNATIONAL Truck quality further lowers your operating costs. Famous INTERNATIONAL engines assure top performance with maximum economy. INTERNATIONAL Tough-Job engineering and all-truck design mean utmost dependability, long life, and lowest maintenance expense.

INTERNATIONAL Trucks with Service-Utility bodies are available in nine models, with 77-inch body lengths for 115-inch wheelbases, 89-inch lengths for 127-inch wheelbases and 96-inch lengths for 134-inch wheelbases. GVW ratings, 4,200 to 8,600 lbs.

Ask your INTERNATIONAL Dealer or Branch for complete details on these time-saving, money-saving workshop trucks. Time payments arranged.

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Better roads mean a better America

INTERNATIONAL® TRUCKS

"Standard of the Highway"

Extra Long

*Koiled Kords**

used as Line Cords Add Flexibility to Telephone Service

★ They reach from one side of the room to the other . . .

★ In ranch homes, from living room to bedroom or kitchen . . .

★ Provide the benefit of multi-station service where extensions would not usually be ordered.

★ Line cords are available in 10′, 15′ and 25′ extended lengths and retract to 16½″, 25″ and 42″ respectively.

Specify KOILED KORDS retractile receiver and line cords on all new telephones — order through your independent telephone supplier.

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50,000th telephone in service in the Ohio Consolidated Telephone Co.'s system of 39 exchanges was installed recently in the home of Mr. and Mrs. EMMET TIMMONS, Route 1, Ashville, Ohio. Left to right:—E. B. JURY, Circleville district manager of the telephone company; MRS. EMMET TIMMONS, BEN TEMPLE, telephone installer, and EMMET TIMMONS, placing the first call over the new telephone.

additions to the company's plant during that period alone involved the expenditure of 6½ million dollars. Of the 50,000 telephones now in service in the company, 23 percent are business and 77 percent are residence.

Mr. Cole pointed out that the company has over 12,000 rural telephones which is 24 percent of the total telephones in service. This large percentage of rural telephones is also true in other telephone companies operating outside of the highly concentrated urban centers. The large rural areas require longer lines per telephone served and this obviously creates construction problems for these companies.

Mr. Cole stated that during the past year the construction accomplishment was second to none in the history of the company, resulting in gross additions to telephone plant during the year of over 1½ million dollars.

Payne Named Gen. Mgr. Bluefield Telephone Co.

PAUL S. PAYNE has been made general plant manager of the Bluefield Telephone Company, according to an announcement by H. J. Huether, Jr., president. Mr. Payne assumed his new responsibility at Bluefield, W. Va., on May 16, transferring from General Telephone Co., of Kentucky.

Mr. Payne joined the General Telephone System in June, 1945, as a plant man at Ashland, Ky., having previously been employed by the Southern Continental Telephone Co. Early in 1946 he was made district plant supervisor at Morehead, Ky., and also served in this capacity for the Lancaster District from 1947 until November 1951, when he was appointed Lancaster district manager. Late in 1952 he was transferred to Morehead, Ky., as Morehead district manager.

R. J. Christenson Advanced To New Position

ROBERT J. CHRISTENSON, formerly assistant controller of the General Telephone Co. of Pennsylvania, has been named senior methods analyst of the General Telephone Service Corp., reporting to Assistant Controller G. Robert Howard, it was announced last month. Mr. Christenson joined the General Telephone organization in Nov., 1946, after service in the US Army Signal Corps. Previous assignments with General of Pa. included supervision of the Revenue Accounting Section.

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BROAD SPECTRUM BRUSH KILLERS

Fortified with patented H. S. 31 to deliver extra creep for extra kill.

Thompson Broad Spectrum 2,4-D—2,4,5-T brush killers set a new standard for ease of application, more effective killing action and more economical results in brush clearance. Now your crews need no special technical skills—they simply mix and spray. Hard woods—all species—brush or weedy growth—powerful broad spectrum Thompson brush killers of controlled volatility remove the hazard of "chancey" effectiveness. Foliage spray or basal bark application, you get more kill per gallon and more gallons for your dollars.

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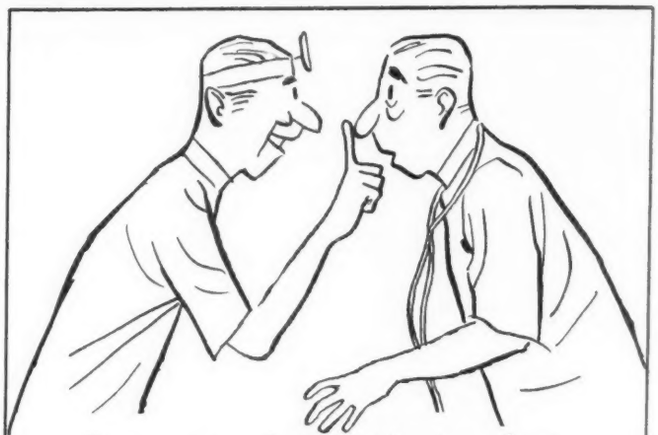
The Doctor Needs A Doctor!

Said Doc's colleague "Your answering machine
Has brought on your state of futility



For answering devices with wipe-off tape
Drive your brain to early senility.

Get a Peatrophone with a permanent disc,
File your messages neatly away,

And you'll always know just what so-and-so said,
You can play it again any day!"

And Doc is just one of the many professional people who rely on Peatrophone's permanent record to tell the truth, the whole truth, and nothing but the truth of every mechanically handled telephone call—AND TO TELL IT LONG AFTER THE CALL HAS BEEN PLACED!

Peatrophone will answer the Doctor's telephone, deliver his own personal message telling when or where he can be reached, or any other information he wishes to leave. It will then make a *permanent* recording of all incoming messages—which can be played back as many times as necessary.

Peatrophone records are marvelously compact—provide capacity for over 130 incoming messages without attention or resetting. The records can be identified, dated and filed away in a space that only microfilm can beat. They are as long-lived as the Doctor's oldest patient—as personal and discreet as the lawyer. In short, Peatrophone's ability to provide a PERMANENT RECORDING of messages makes it the only completely practical telephone answering machine for professional men.

Write today for c o m p l e t e information and literature on Peatrophone—your new source of revenue.

Note: Selective harmonic ringing subsets now available—all frequencies.

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AFTER NINE YEARS WEATHERING

TELEPRENE®

IS STILL AS GOOD AS NEW

TELEPRENE, Whitney Blake's neoprene-jacketed drop wire, was first produced in 1944. At that time samples were installed in a span on an exposed section of the Whitney Blake Company plant roof.

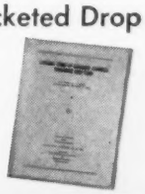
In succeeding years other samples were similarly installed and all were removed for examination in October, 1953.

The oldest length had been exposed to natural weathering for more than nine years. The neoprene jacket on this sample—and all the others—is unchanged in appearance, shows no cracks, and has retained its flexibility.

Here then, is undisputable evidence of the superior aging qualities of TELEPRENE drop wire to match the actual service experience of telephone men everywhere who have been using TELEPRENE. With this evidence of the superiority of TELEPRENE and of the years of trouble-free service it has given, good judgment demands continued use of this fine product.

Specify Whitney Blake telephone wire and cable for all your needs and know that you are gaining the benefit of engineering and production "know-how" built up through more than fifty years of contact with the problems of the telephone industry.

A technical report on the Natural Aging of Neoprene Jacketed Drop Wire is yours for the asking — write for it today.



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• 666 cities and towns in 20 states are served by the 234 directories that retain Loomis services.

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810 Baltimore . . . HArrison 1270
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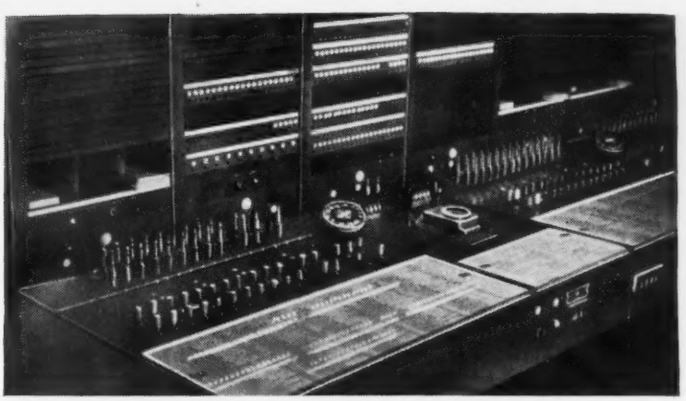
...works for you in important cost-saving ways



Photos courtesy of Automatic Electric

MODEL 33
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AUTOMATICALLY FIGURES TOLL TIME! With Calculagraph on the job, there is no need for time-consuming, service-slowing manual figuring of elapsed time. Calculagraph does it all quicker, easier and, most important, with complete accuracy.

ACCURATE TO THE SECOND! Calculations are accurate down to the last second. Authoritative and indisputable, they make it possible to collect all the revenue due on every toll call — a basic advantage in exchanges large or small.

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THE STANDARD OF ACCURACY SINCE 1892

Hawaii expands toll circuits with LENKURT MICROWAVE

Breathtaking in its beauty, the geography of the Hawaiian Islands presents serious problems to telephone men. Lofty mountains make open wire and cable lines very costly to construct; swift ocean currents make it impractical to lay inter-island submarine cable. The answer? Lenkurt Microwave!

Lenkurt Microwave and Lenkurt Carrier now provide toll channels between Honolulu and all the islands of the Hawaiian group. Most of these channels are included in the Hawaiian operator toll dialing network.

Here's why the Hawaiian Telephone Company chose Lenkurt Microwave: (1) It is engineered by telephone men to telephone performance standards. Gives reliable, toll quality service. (2) It is quick to install, easy to maintain. No day-by-day realignment. (3) It is available in a range of low frequencies for the most difficult over-water applications, and in a range of higher frequencies for other applications. (4) Standard transmission levels, standard signaling, and 2/4 wire terminations make it easier to integrate into existing telephone operations. (5) It provides the maximum number of channels in its allotted spectrum. Allows plenty of room for economical expansion.

Have you an unusual toll problem? Automatic can provide the best solution! Write today about our switchboard-to-switchboard engineering service. Ask for Forms 72A-P16 and 72B-900-P4.

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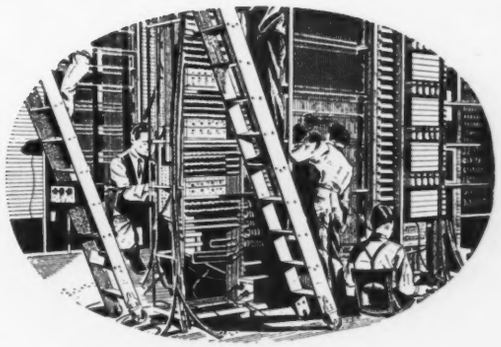
AUTOMATIC ELECTRIC—*Leaders in Carrier Communications*—**LENKURT**

THE Telephone Engineer **EDITORIAL**

Too Little For The Future



THE PRECISELY proper method of determining the cost to a telephone company of depreciation, has long been the subject of debate, argument, and at times even controversy.

This question of the cost of depreciation has always been a perplexing one. There have been a great variety of ideas about it during the history of the telephone business.

In the very early days of the business there was a school of thought to the effect that there was no such thing as depreciation if the property was well maintained. Those backing this idea overlooked, of course, some highly important elements of depreciation such as obsolescence and inadequacy.

Some others held to the idea that there was no necessity for the creation of a reserve for depreciation by charges against current income — that any replacements should be charged directly to expense.

Our present system of depreciation accounting is the result of many years of study by regulatory bodies and by regulated companies. An example of the complexity of the proposition is the fact that it has now been almost 35 years since the Congress directed the Interstate Commerce Commission to prescribe depreciation rates for companies under its jurisdiction — which then, in 1920, included interstate telephone companies.

This project, as it affects telephone companies, is only now in process of completion by the Federal Communications Commission, which in 1934 succeeded the ICC on the telephone part of the job.

Yet, after all this work and all these years, no one who is conversant with the subject would claim that the present system of depreciation accounting does in fact tell the actual cost of depreciation for any current accounting period.

The plain fact is that, no matter how many figures you make or how scientifically you make them, the actual overall cost of depreciation is always an estimate.

That cost is always an estimate because, in most cases, the actual cost can be determined only at some time in the future, when the item is actually removed from plant, and the cost of removing it and the amount of salvage on it are definitely known.

It is also always an estimate because it includes such costs as those arising from obsolesence and inadequacy — which no one can calculate in advance.

And the danger of an estimate — even though it is carefully and scientifically made — is that it may be dealt with not as an estimate, but as a fact!

We think that, right now, there is danger that depreciation rates being allowed telephone companies by regulatory commissions are too low.

Telephone companies are now using up in the service of the public, and are retiring from plant, items which will have to be replaced at a cost frequently several times the cost of the item replaced.

Further, the very rapid growth of the telephone business in the past decade or so has brought about the retirement, for reasons of inadequacy and obsolescence, a great deal of property for which there had been estimated a much longer service life.

These and other causes, we think, made present depreciation rates inadequate in many cases.

The federal government is taking into account a similar situation in the industrial and manufacturing field, and is to allow more rapid amortization, for tax purposes, on plant.

It seems to us that the telephone industry needs some treatment of the kind.

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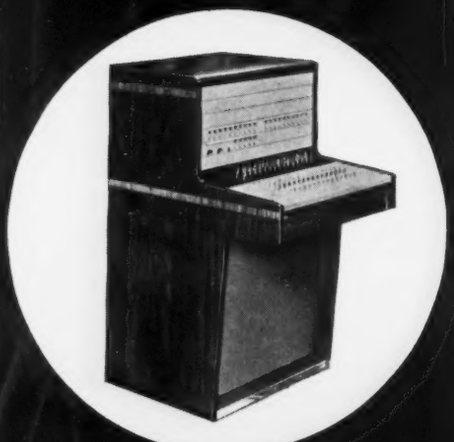
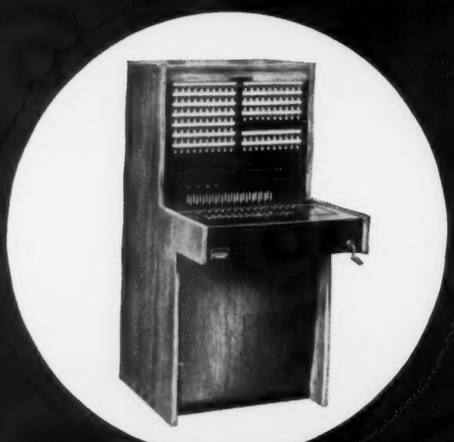
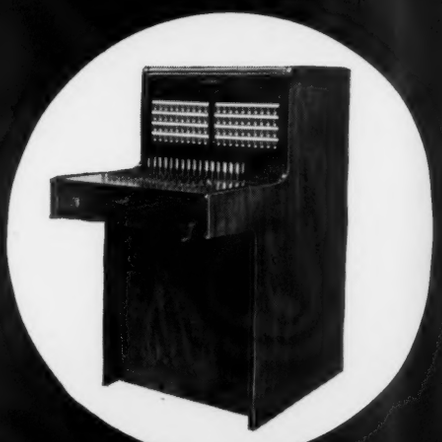


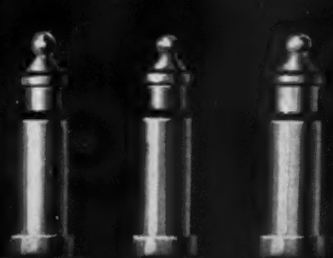
No. 120 PBX Switchboard



No. 106 PBX Switchboard



No. 128 PBX Switchboard



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Line Relays for *each* line—for uniform brilliance in lamp signals and to prevent "false alarm" signals from line leakage.

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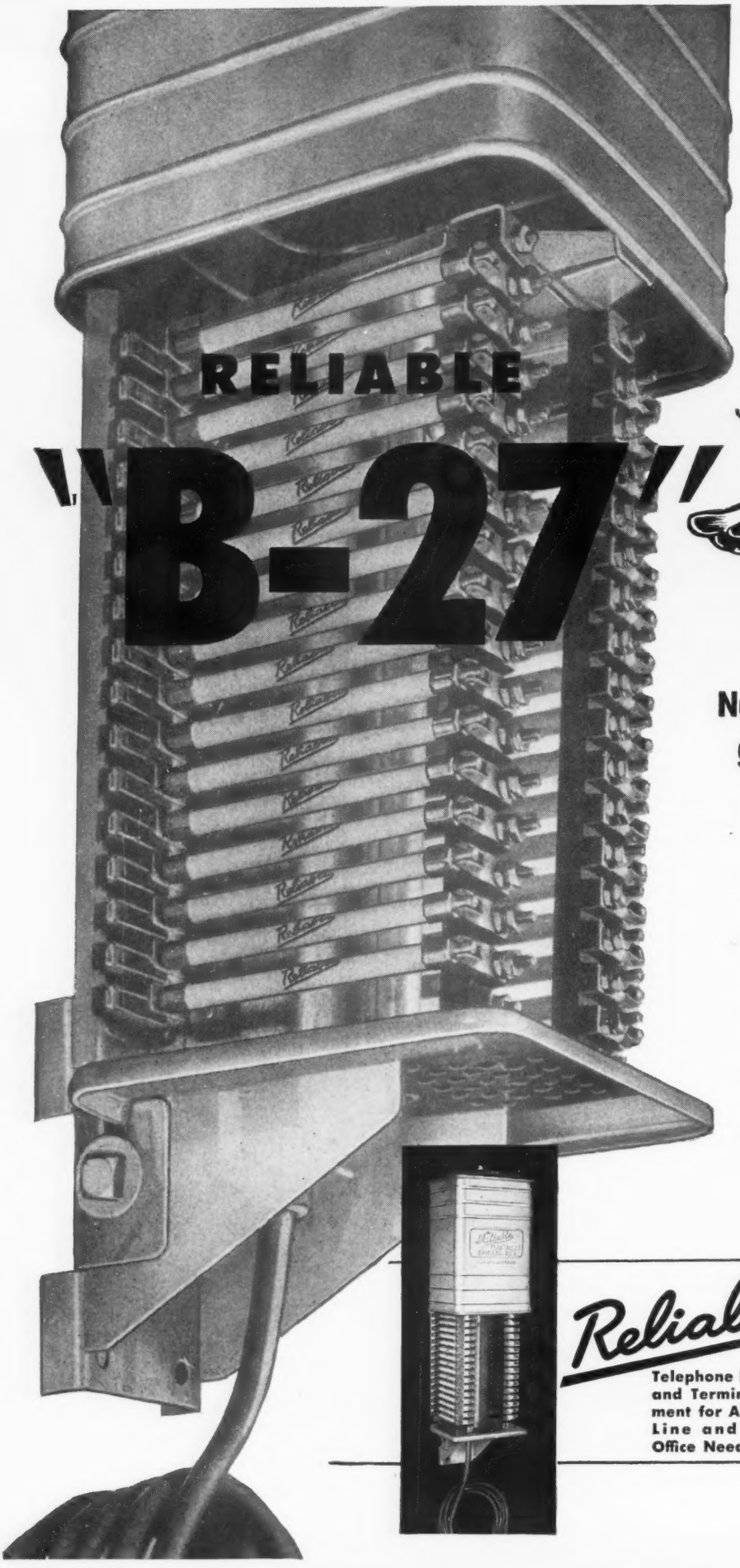
Cabinets. The sun tan phenol key panel is furniture-handsome. The rounded corners are more pleasing and practical. Walnut is standard.



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Number B-27 Cable Terminal gives you these features

- Static discharges are dissipated with no time lag by the self-cleaning P495 Sawtooth Discharge Blocks. Blocks are retained by individual springs — cannot be accidentally loosened or crossed.
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OVER 45 YEARS' SERVICE TO THE UTILITIES

By ROLAND DAVIES & FRED HENCK

Proposed "pay-as-you-go" corporation income tax program slated to cost regulated utilities hundreds of millions annually . . . Army Signal Corps to increase long-distance rates over Alaska Communications System . . . Quiet bargaining ahead for telephone industry . . . REA receives approval of $75,000,000 loan fund.

A RATHER innocuous-looking proposal in Congress is slated to cost regulated utilities hundreds of millions annually over the next five years if it wins Congressional approval.

The plan affects only fairly sizable companies, but could hit every firm with net income of around $100,000 a year if it goes through in the form adopted by the House.

It is a "pay-as-you-go" corporation income tax program, vastly different from the one individual income taxpayers have been conditioned to accept over the past decade.

When the withholding tax plan for individuals was adopted, the government in effect forgave part of a year's income levy for the public so that no one would pay more than a year's income taxes in a year. Corporations, on the other hand, would be hit for 110% of their normal tax liability for five years if the recommendation now before Congress is adopted.

The situation as this column was written was about like this: the House has adopted "pay-as-you-go" for corporations with income tax liability of $50,000 a year or more. The Senate Finance Committee had tentatively approved the system, but took the vote at a time when several opponents of the system were not present.

If the Finance Committee adopted the proposal in final action on the new technical tax revisions bill, it would go before the Senate for action, with a vigorous fight likely in the offing. Opponents were hopeful that they could persuade the committee to change its stand in the final decisive voting. But — whether or not the plan is adopted by the Senate — it will stand before Congress for a while, since the House has passed it and it will come up for decision in the joint House-Senate conference committee consideration of the omnibus tax revisions measure.

Under the proposal, a company in 1955 would pay its full tax liability 1954 net income, plus 10% of its estimated income tax on 1955 operations, in two 5% installments in September and December. In 1956, it would pay the remaining 90% of its levy on 1955 activities, plus 20% of its tax on 1956 net income. In the three succeeding years, the company would pay 30%, 40%, and 50% of its estimated income tax during the year in which the net income is earned. At the end of the five years, each company would be paying 50% on its corporation tax on a "withheld" basis, and its annual cost then would drop to a mere 100% of its income tax.

The program thus bears down hard on any corporation with substantial earnings, but it is particularly hard on regulated utilities. Despite the fact that a clearcut case of added income tax payments would result — just as much as if the rate itself were increased for five years — it very likely would be difficult to persuade regulatory commissions that rate increases should be approved to offset the payments, since they could reply that the added tax payments are just part of a "catching up" process.

Another important effect would be on the working capital of regulated utilities. It has been a trend lately for a number of commissions and courts to rule that utilities need not include working capital in their rate bases, since they have tax accruals available for working purposes. Under the Congressional proposal, this working capital would be diluted and

another complexity of utility operation would arise.

It might be well for operators of companies unaffected by the present proposal to bear in mind the words of a veteran observer of Washington affairs, spoken to this column some months ago:

"The present withholding system for individual income taxes, even though it was hailed as a great contribution to the individual's budget problems when it was put into effect, is responsible more than any other single factor for the present high income taxes.

"If, after a man's full income for a year was received and spent, he became liable on the following March 15 for income taxes of the amount he is paying now — $500, or $1000, or $1500, even for people with modest incomes — he simply couldn't pay them. Even if he could, he'd be far more conscious of the income tax 'bite' out of his pay. In either event, the pressure on the government to reduce the income taxes some way — maybe by spending less — would be irresistible.

"As it stands now, the individual wage-earner never sees the money that is taken out of his pay; he gets along without it; and on March 15, the chances are that he owes the government little or nothing. Maybe he even gets a refund, and feels pretty good about it, without really realizing that income tax already has taken 15 or 20 cents out of every dollar he made during the year."

Of course, managements of companies are pretty well aware of the taxes they pay, regardless of when they pay them. But there is something to be said for the viewpoint that any system of tax payment which tends to spread the period of payment, thus obscuring the total amount of tax to be paid, is a contributor to higher rates.

ACS Boosts Rates

WASHINGTON observers of communications matters have been slightly intrigued by a recent announcement by the Army Signal Corps to the effect that long-distance telephones rates over the Signal Corps' Alaska Communications System, which handles traffic from Seattle, Wash., to points to Alaska, are being increased July 1.

While ACS rates are not regulated, it is necessary that they be explained to the satisfaction of Congress, which appropriates money for the system, and also for the benefit of the public making the calls.

The interesting feature about the announcement is that, with the exception of the fact that it reports that the rates are going into effect, without reference to a regulatory commission, it could have been written by a commercial telephone company.

The present rates have been in effect since 1945, the Signal Corps points out, and users now are receiving better service as a result of a recent costly modernization and expansion of facilities. ACS has been hit by four civilian employe pay boosts since 1945, increases in shipping and transportation costs, and higher maintenance expenses.

Incidentally, telephone companies operating in continental US will receive no increase in their share for handling calls from points in the US to the Seattle terminal of the Alaska system. The 75-cent boost at all levels of rates for a three-minute daytime call, with the exception of the highest rate bracket ($9) for which no increase is to be effective, will accrue entirely to the Signal Corps system.

Another point by ACS, incidentally, was that the reduction of the long-distance excise to 10% will pretty well cancel out the added charges.

It all seems to show that inflationary costs and the need for rate increases spares no one, even an organization with no requirement to earn a return on invested capital.

Coming Conventions

Indiana Telephone Association, Claypool Hotel, Indianapolis, June 17, 18.

Washington-Oregon Telephone Association, Multnomah Hotel, Portland, June 18, 19.

New Hampshire-Vermont Telephone Association, Farragut Hotel, Rye Beach, New Hampshire, June 23, 24.

Michigan Independent Telephone Association, Hotel Pantlind, Grand Rapids, Sept. 9, 10.

Rocky Mountain Telephone Association, Newhouse Hotel, Salt Lake City, Utah, Sept. 16, 17.

Tennessee Telephone Association, Hermitage Hotel, Nashville, Sept. 16-17.

Arkansas Telephone Association, Majestic Hotel, Hot Springs, Sept. 20, 21.

United States Independent Telephone Association (National Convention), Conrad Hilton Hotel, Chicago, Oct. 11, 12, 13.

North Carolina Telephone Association, Carolina Hotel, Pinehurst, Oct. 18, 19.

South Carolina Telephone Association, Myrtle Beach, S. C., (Hotel to be named later), Oct. 25, 26.

Virginia-West Virginia Telephone Association, Roanoke Hotel, Roanoke Oct. 28, 29.

Oklahoma Telephone Association, Huckins Hotel, Oklahoma City, Nov. 4, 5.

Alabama-Mississippi Telephone Association, Thomas Jefferson Hotel, Birmingham, Ala., Nov. 8, 9.

South Dakota Telephone Association, Sioux Falls, Nov. 11, 12.

Georgia Telephone Association, Bon Air Hotel, Augusta, Nov. 12, 13.

Florida Telephone Association, Soreno Hotel, St. Petersburg, Nov. 15, 16.

"Quiet Bargaining Ahead ? ?"

SEVEN YEARS ago this column, beguiled by an apparent obligation to forecast the outcome of a violent controversy in the telephone labor field, looked at all the factors and cautiously forecast that there would not be a telephone strike that year. This turned out to be monumentally wrong, as most readers who remember 1947 will recall, but fortunately alert editing (in Chicago) caused deletion of the copy from this publication, which appeared just a few days after the strike was well under way.

Spared the embarrassment of seeing this boner in print, this column nonetheless drew the conclusion that it is not wise to make flat predictions about upcoming events in the field of organized labor, and has pretty well adhered to that view since then.

Incidentally, we are hardly alone in this reluctance to predict specific events, although this does not apply to such thoughtful and analytical prognostication as one sees in print from time to time, such as "Unions will seek pay increases this year," or, after the Eisenhower election, "Organized labor will have less influence on the new administration than it has had in recent years." These are true, just like a forecast that a team from the National League and one from the American will play in the World Series.

All of this is a somewhat wordy way of winding up and patting ourselves on the back for reaching the conclusion a while back that while the Communications Workers of America was concentrating on company-paid surgical and hospitalization insurance in bargaining with Bell System companies this year, it

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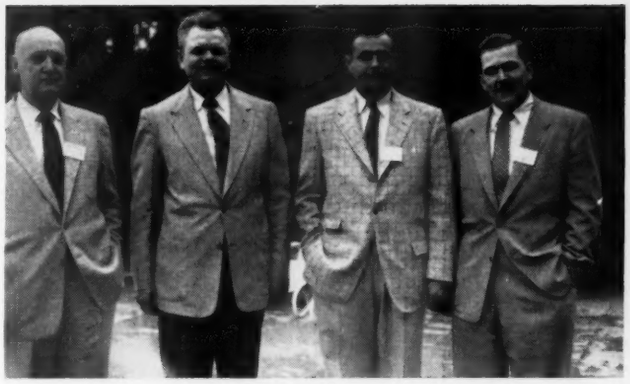


Members of these USITA Executives' Conference groups are (l. to r.):—C. C. PEARCE, Riceville, Ia.; E. G. CARLSON, Creston, Ia.; EARLE BELLAMY, Knoxville, Ia.; JAMES MORRISON, Lincoln, Neb.; EARLE BLOYMEYER, Columbus, Neb.; C. H. McLEAN (speaker) Chicago; ALLAN RYDER, Bangor, Pa.; C. S. SNYDER of USITA's Washington office; and WM. DRIGGS, Sherman, Texas.

Between conference sessions the TE&M camera photographed the above groups. Left to right are: R. E. SHOTTS, Chicago; E. T. McCORMICK (speaker) New York City; THEO. GARY, Chicago; R. A. LUMPKIN, Mattoon; EMMETT SWANSON, Fort Wayne, Ind.; C. S. CADWELL, Chicago; MR. & MRS. FRED NORRIS, Muskegon, Mich.; MRS. CHARLES S. CADWELL, Chicago; and MR. & MRS. J. F. VAN DE VUSSE, Bloomington, Ill.

U-S-I-T-A Executives Meet in Colorado

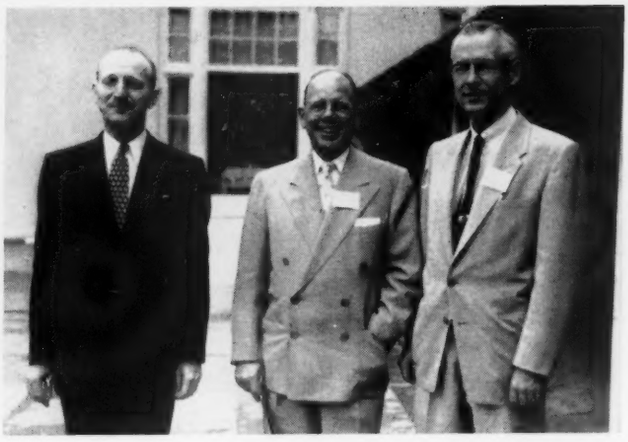
Important issues facing Independent telephone companies given careful analysis at U-S-I-T-A Executives' Conference. Rates, toll compensation, sales efforts and use of radio rate top conference discussion spots.

RATE AND regulatory problems, sales efforts to meet current economic trends, expansion of the use of radio by Independent telephone companies, toll compensation and settlements, service obligations, financing, and the issue of common carrier and private operation of communications facilities — the most important issues facing the nation's Independents today — received careful analysis at the United States Independent Telephone Association's annual executives' conference in Colorado Springs, Colo., May 10-11.

More than 400 Independent officials heard talks by USITA President Warren B. Clay; Illinois Commerce Commission Chairman George R. Perrine; President W. Roy Jarmon of the General Telephone Co. of the Northwest, who heads the Toll Compensation & Settlements Committee; General Commercial Superintendent Kenneth L. Lawson of the Lincoln (Nebr.) Telephone & Telegraph Co., USITA Commercial Committee chairman; C. H. McLean, who heads the USITA Radio Service Committee; Palmer Hoyt, Editor and Publisher of the *Denver Post;* and President Edward T. McCormick of the American Stock Exchange.

In his Presidential address, Mr. Clay brought out that the recent reduction in federal excise taxes on telephone service "will ease the burden of necessary rate increases" and will "increase the value of telephone service to the subscriber," stimulating his use of the service "just at a time of changing economic circumstances, when the industry may well be grateful for the opportunities for service promotion."

Turning to activities of the Rural Electrification Administration, and pointing to his long friendship with REA Administrator Ancher Nelsen, Mr. Clay said that "while we welcome evidence of a cooperative spirit at the top level of REA, we still



Members of the above USITA Conference group are (l. to r.):—COL. LEONARD DENSMORE, Lincoln, Neb.; THOMAS McMAHON, New York City; H. J. HUETHER, Lexington, Ky.; GEO. RICHERT, USITA secretary, Washington, D. C.; C. S. CADWELL, Chicago; and BALLARD ATHERTON, Hawaii.

watch with some concern the advent of new cooperative organizations in service areas where conflict and competition may eventually develop . . . This much we know: the American farmer wants telephone service and he is entitled to telephone service on a self-supporting rate basis. Anything we, as an industry, can do on that basis to lessen the gap between supply and demand in the rural telephone subscriber field will probably be of more lasting importance during the next few years than ever before in our long operating history."

After discussing the plan of the state of California for its own microwave system, and the issues of common carrier vs. private system operation, Mr. Clay commented that "In short, it is going to take all the resourcefulness of the best brains the telephone industry can mobilize to make it crystal clear to the FCC, and anybody else with a controlling voice in this matter, that the overall public interest lies in making the fullest use of the co-ordinated facilities of established communication companies."

Mr. Clay's complete address is reproduced in this issue. *See page* 47.

Gradual Demise of Party Line Forecast By Perrine

CHAIRMAN Perrine of the Illinois commission declared that "The operating companies must feel free to come to us with their problems and give us the complete story of their side of the case, with a knowledge and understanding that it is not our purpose to grind them into the ground, but rather, it is our purpose to make them strong both in plant and finances to the end that they will be able to give to their customers the best service possible."

Outlining changes in public thinking about telephone service in the current economic situation, Chairman Perrine said that second lines for residence subscribers, particularly those with teen-age children, should be an important source of future business. He said there has been a "gradual demise" of the party line, and that "probably one of the mistakes" in present rate-making is that there is not sufficient differential between individual and party line charges.

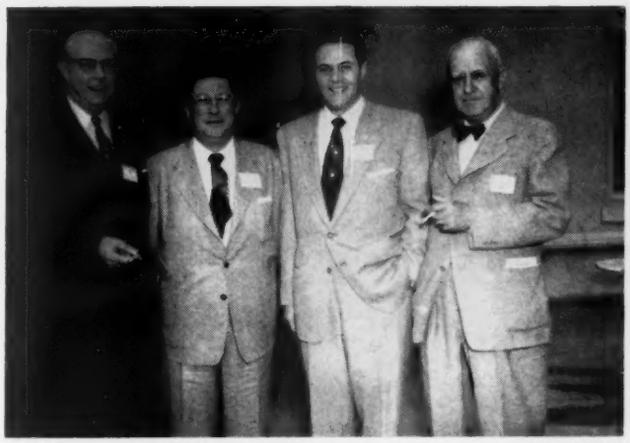
He went on, "To keep up with public acceptance and the economic plateau we are now passing through, has cost all of you tremendous sums for additional plant during inflationary times when you could hardly afford the expenditures in order to capture the additional revenues. It is one of the 'believe-it-or-not' facts of the telephone business that post-war inflation has penalized you for expanding to meet public demand for telephone service. Unlike other business endeavors, because you are the only suppliers of the service in your territories, you have no choice . . . Thus, to meet customers' increasing requirements, you have to keep on enlarging your systems even in the face of high postwar construction costs."

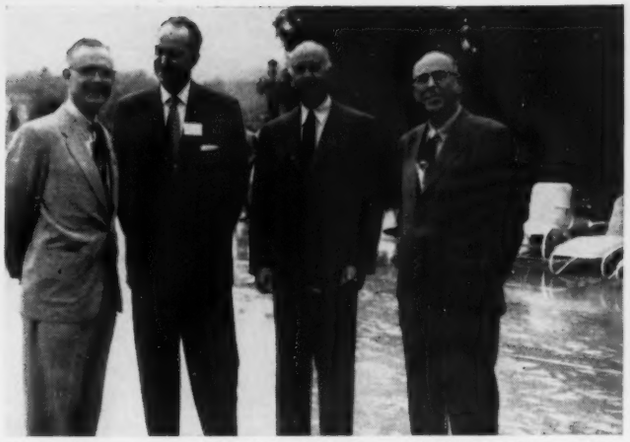
CARTER THOMASSON, Lancaster, S. C. (left) and W. C. HENRY, Bellevue, Ohio, attended recent USITA Executives' Conference.

He added, "Rates for service have had to be adjusted upward in order to cope with these huge expenditures. Last year in my own state of Illinois, companies under our jurisdiction spent an estimated $100,000,000 in plant expansion, and in each year prior thereto, since the war, sums equal to that amount, in an effort to keep up with the growing demands for service. All of you here know as well as I do what this does to a rate of return on invested capital. In order to be able to continue to attract the investment market, the natural consequences are rate increases."

Giving the report of the USITA toll compensation committee, Mr. Jarmon announced that almost $116,000,000 was received by Independents last year in this category, compared with the $113,000,000 expected when a new proposed agreement was worked out with the Bell System. He explained that "A" compensation (use of local exchange facilities) was $60,430,000, "B" payments (ticketing, timing, and use of associated toll facilities) were $42,180,000, and the line haul compensation (use of toll lines) was $13,229,000. Mr. Jarmon's paper is reproduced in this issue. *See Page* 50.

At the conclusion of his talk, Mr.





Members of this USITA Conference group are (l. to r.):—T. C. THOMPSON, Rochester, N. Y.; FOSTER B. & JOHN H. McHENRY, Jefferson City, Mo.; LARRY REYNOLDS, Ontonagon, Mich.; BALLARD ATHERTON, Hawaii; LESLIE WARNER, Chicago; R. A. LUMPKIN, Mattoon, Ill.; JOHN H. AGEE, Lincoln, Neb.

Jarmon pointed out that area customer toll dialing, very important to the Independents, is "already on us." His comment precipitated the only questioning from the floor of the conference, when Frank E. Bohn, chairman of the Home Telephone & Telegraph Co., Fort Wayne, Ind., asked that Mr. Jarmon's committee consider the increased investment of the Independents for operator or customer toll dialing.

Mr. Jarmon said that his committee has not yet gone into a detailed study of the subject, and has requested individual Independents to make up their own cost estimates and take the subject up with their own connecting Bell System companies.

At its meeting, the USITA Board of Directors adopted a resolution reaffirming its previous instruction to the committee, stating that "in recognition of the seriousness of any further delay" in completion of the line haul cost studies now under way, and the review of the contour and level of A and B toll compensation settlement schedules to reflect current costs of traffic interchange, "it is imperative" that the Independents involved "realize their responsibilities and furnish information that is requested of them with the least possible delay."

"We Must Sell Again"

MR.LAWSON, talking on "Let's Face it — We Must Sell Again," declared that even in deserts and remote areas, there has been development of business, industrial, government, and residential establishments with heavy communications needs. He commented that "Nowadays, when representatives of large concerns look over your community for a factory site, they inquire closely into the availability, reliability, and quality of your telephone system," including possibly PBX, mobile, teletype, telemetering, and microwave services.

Pointing to communications demands of the petroleum, power, railroad, and airline industries, Mr. Lawson said, "We can serve these customers properly only if we can meet their requirements as already prescribed."

He emphasized the importance of improved service by small companies, declaring that, "The rapid growth of private line facilities, which cover large geographical areas, the development of operator toll dialing and the enlargement of local or common service areas, illustrate clearly the need for uniform service standards for all companies, regardless of size."

Noting that the Bell System has under way a nationwide program to stimulate long-distance usage, Mr. Lawson said the fact that most Independents cannot have full-time sales forces should not deter them from effectively covering the market. He also brought out that Independents are far behind the Bell System in pay station development, stressing the large revenue potential available.

May 10 birthdate for MRS. HERBERT LELLO, Chicago, and LESLIE WARNER, Chicago, was celebrated at Colorado Springs.

In his talk on radio use by Independents, Mr. McLean commented that, "It would appear more equitable and less wasteful of spectrum to assign frequencies on a common carrier basis to meet all public service demands in the same manner that telephone wire service requirements are met, than to assign separate frequencies to each and every classified segment of industry, provided, however, that telephone common carriers do their part in providing the required radio facilities."

Even the smallest Independents, he declared, can establish mobile service initially serving company vehicles primarily. Efforts of USITA to obtain an exclusive assignment for company mobile units, similar to that available to power companies in the industrial service, have not been wholly in vain, he noted, pointing to proposed FCC rules on common carrier radio operation which would permit common carriers to provide mobile service to their own vehicles if the number served is not more than 50% of the total mobile units connected to a channel.

Another use cited by Mr. McLean is the provision of rural service to areas not readily reached by wire lines. "There is considerable activity on the part of Independent manufacturers, at the moment, to provide carrier equipment suitable for rural telephone service, and it would

Recent USITA Executives' Conference drew record attendance. Shown above are (l. to r.) MR. & MRS. JOE GALLIGAN, San Francisco, Calif.; MRS. D. T. STRICKLAND, Brownwood, Texas; MR. & MRS. WALTER DAKIN, Madison, Wis.; MR. & MRS. P. M. FERGUSON, JR., Mankato, Minn.; MR. & MRS. HOMER THOMPSON and daughter, Wiswell, Neb.

appear that the next step would be one of dispensing with the physical wires entirely for many such applications," he brought out.

Hoyt Hits Prophets of Economic Depression

PALMER HOYT, Editor and Publisher of the *Denver Post*, who has an outstanding career both in public service and in the editorial field, assailed the prophets of depression in his feature address before the United States Independent Telephone Association executives' conference May 11, emphasizing that, "It is not straight thinking to consider the present unemployment to be dangerous or to believe that every time there is a dip in the American economic upward curve, we have to man the pumps of federal spending."

He urged the Independent telephone executives to reemphasize selling of services, and pointed out that straight thinking and hard work are the factors most imperative in maintaining the nation's economic prosperity and strength.

"When President Eisenhower announced his government economy program with its noncomitant savings in federal spending, the President observed that he expected business to pick up the slack," Mr. Hoyt continued. He warned that "business has a chance to make good and to stabilize enterprise," adding that if "big government" gets back in the driver's seat with a long-range program of deficit spending and controls for private business, "It may be a long time before you, as businessmen, get another chance to operate in a climate of lowering taxes, diminishing government controls, and under an administration that believes in business."

Declaring that an American economic depression would throw the free world into bankruptcy and enable the communists to overrun the world, Mr. Hoyt stated that, "The hope of the world today is a strong America around which the free nations can rally and from which they can draw courage, strength, and sustenance."

Committee Reports

THIS YEAR'S spring conference was the first not attended by USITA Executive Vice President Clyde S. Bailey in the nearly 15 years he has been associated with the organization. Mr. Bailey remained home under doctor's orders recuperating from a virus infection. In his place, Col. W. C. Henry, president and general manager of the Northern Ohio Telephone Co., summarized Mr. Bailey's report on Washington legislative activities to the conference.

The report of the Committee on Problems of Small Companies outlined a proposed procedure for the 14 regional committees to aid small distress companies. Under the program, meetings would be held every six months with the managements and directors of companies needing assistance, while sessions would be held quarterly between district committeemen and Bell company representatives, to canvass the results of meetings with the companies requiring aid.

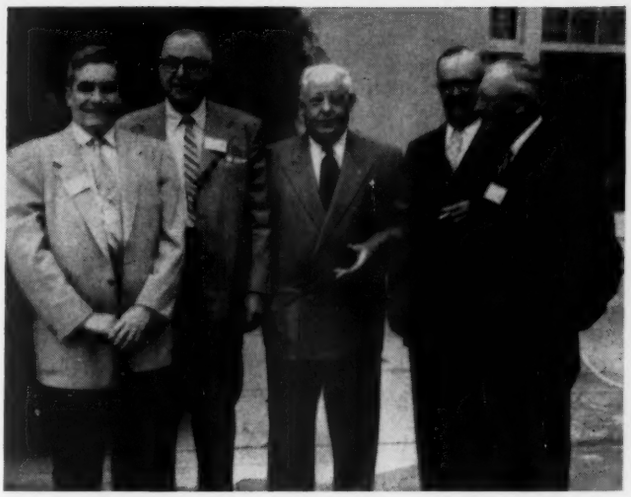
USITA's National Defense Committee, recalling the domestic operating industry advisory committee meeting wtih the Business & Defense Services Administration, said that, "During the intervening months, the BDSA Communications Division has been concerned principally with a study of various methods of obtaining information needed to establish the essentiality of the industry, including the operating and manufacturing companies and their facilities.

"As a result of sample studies made of telephone and telegraph facilities in a number of states, agreement has been reached betwen BDSA and industry representatives with regard to the basis for establishing service essentiality."

The USITA Plant Committee also stressed that "Plant protection is fast becoming a vital issue because communications are extremely important in the event of enemy attack; therefore, the military are keenly interested in duplicate installations in the country away from present equipment."

Leslie H. Warner, president of the Leich Electric Corp., was elected a member of the USITA Board of Directors, succeeding Roy Siemund. Mr. Siemund resigned from the board when he retired as president of Leich.

In its report, the USITA Advertising Committee brought the Independents up-to-date on the national advertising program which is now getting well under way, with several national magazine insertions already made or scheduled. The committee also said that the USITA national convention is a newsworthy event which should be publicized more widely, and recommended an appropriation under which the Telephone Advertising Institute would work on the project at the up-coming national convention to obtain press, radio, and television coverage.—THE END.



Among Independents attending USITA Executives' Conference were: (l. to r.) WALTER WRIGHT, Dallas, Texas; GUS LANE, Russellville, Ark.; KELLY McNISH, Bristol, Tenn.; D. T. STRICKLAND and W. G. WINTERS, Brownwood, Texas; ROBERT FAGIN, Junction City, Kans.; DOUGLAS GLEASON, Topeka, Kans.; RODNEY COGGIN, Warsaw, Va.; LOYD MORRISON, Grinnell, Ia.; and F. W. HAUPT, Rochester, N. Y.

Telephone Problems In A Changing Era

By Warren B. Clay

"The crying need of our telephone industry is to win public and regulatory acceptance of more realistic repricing of our services in relation to the present market."

SINCE THE END of World War II we have been passing through a period of unprecedented plant expansion due to a number of factors, including war-time plant restrictions, pent-up subscriber demand, and so forth. For that reason it may be that the rapid increases in the number of telephone stations will level off somewhat in the years immediately ahead. I do not pretend, of course, to be a prophet on such matters, but consider these few figures on our industry's growth.

Until the end of World War II, the growth of telephone stations in the United States, since the beginning of the century, was roughly on the average of 10,000,000 for every decade and a half. But since the end of World War II, there has been added nearly 20,000,000 telephones within the span of *eight years!* We know that there has been some leveling of demands in recent months. On the other hand, the dynamic growth of our industry has always showed a tendency to accelerate, in proportion, over future periods. But even if the same rate of growth continued, and making no allowance for the various new uses to which we know the telephone will be put in years to come, we would be installing the 100,000,000th telephone in the United States some time in the early 1970's. So, it is only reasonable to suppose

**Mr. Clay, U-S-I-T-A president and president of the Hutchinson (Minn.) Telephone Co., presented this paper at the 1954, U-S-I-T-A Executives' Conference.*

Presentation of Hawaiian lei to MRS. WARREN B. CLAY, wife of USITA Pres. CLAY, was made in typical Hawaiian style by BALLARD ATHERTON, pres. of Hawaii Tel. Co., during USITA Executives' Conference. Left to right are: MRS. ROBERT TAIT, Rochester, N. Y.; MR. CLAY, Hutchinson, Minn., MRS. CLAY; and MR. ATHERTON. ROBERT TAIT, pres. of Stromberg-Carlson Co. is the smiling onlooker at right.

that many of us here will live to see that event.

And the mere discussion of such a possibility reminds us — if we ever needed to be reminded — that we are engaged in a dynamic business. It shows why we cannot afford to look backward too long, nor place too much reliance on precedent, in planning our course for the future. Experience is a golden treasure in the hands of the wise man who knows how to use it. But he must also recognize the importance of keeping up to date with the most recently available information and the latest improvements and equipment for handling new situations never before anticipated.

It is in this spirit that I have attempted to make a brief, over-all evaluation of our Independent telephone business as of this day in early May, 1954. Turning now to the immediate record of our association's work during the past year, we have seen some positive signs and some negative signs. And we have seen some signs which are going to demand careful and constant attention of a continuing nature.

On the positive side, we can rejoice in the partial relief of our subscribers from the heavy burden of the high wartime excise taxes which formerly took 15 cents out of every dollar spent on monthly bills and a quarter out of every dollar on long-distance calls. We welcome the good judgment of Congress in lowering these excises to 10 per cent. It will help us to serve our public in a number of ways.

Primarily, it will ease the burden of necessary rate increases, which are bound to continue during the coming year at the state commission level. It will increase the value of telephone service to the subscriber; and it will stimulate the subscriber's use and demand for his service just at a time of changing economic circumstances, when the industry may well be grateful for the opportunities for service promotion. By the same token, this tax relief should help to popularize telephone service in the eyes of the subscriber during the period when the strains and pressures of war and postwar operating restrictions may have left their mark, here and there, upon the good public relations record of some of our member companies.

This interesting discussion group was photographed at the USITA Executives' Conference. Clockwise: CLARE WILLIAMS, Marion, Ohio; HERBERT HUSSEY, Lafayette, Ind.; CLIFF McCORMICK, Terre Haute, Ind.; WILLIAM BECK, Indianapolis, Ind.; MERLE HALE, Lincoln, Neb.; and HARRY HUETHER, Lexington, Ky.

Another development on the plus side if the ledger for our Independent companies has been the successful record of our United States Independent Telephone Association during the congressional session now drawing to its close. We note, with satisfaction, the enactment of the Rogers-O'Hara Bill, protecting a very important exemption of our Independent companies from what might otherwise become the duplicate and burdensome general jurisdiction of the Federal Communications Commission, simply by reason of use of radio facilities.

I think it is only being realistic to say that some of our companies may have been apprehensive or hesitant about using some of the latest radio and electronic improvements because of the fear of such regulatory complications. Thanks to the new legislation, which probably could not have been accomplished without the understanding and co-operation of the FCC, all that is a thing of the past. These companies may now go forward with full assurance and liberty of action to take advantage of the latest techniques and improvements in radio and electronic equipment, which are rapidly becoming a part of normal telephone operation.

We note that another year will probably pass without a mandatory increase in the minimum hourly wage under the federal Fair Labor Standards Act — despite indications very much to the contrary earlier this year. As a matter of association policy, we realize that some of our smaller companies still feel that such an increase — certainly any substantial increase—in this minimum hourly wage would constitute a serious operating problem under present economic circumstances.

These and other developments on our legislative program — including our association's participation in the effort to amend the Federal Highway Act, so as to reimburse companies for the expense of relocation of plant facilities due to federal-aid highway construction — provide a background perspective on the months which are behind us, so as to focus our attention on the problems which confront us in the months ahead.

REA Activity

UNDER THIS heading I would like to mention two situations which are very much in the formative stage in Washington right now. First, there is our relationship to the Rural Electrification Administration, which is going forward under its statutory obligations to make loans for rural telephone service. I am glad to say that the general climate at REA headquarters in Washington has improved from the standpoint of sound and efficient administration of REA telephone loan policy as compared with what it was not so long ago.

This is a personal opinion, of course. And I am frank to admit that I may be influenced in my personal judgment by the fact that my good friend of years standing, Ancher Nelsen, has taken over the important responsibility of REA Administrator. If so, I hope you will bear with me for what might reasonably be called a pardonable indulgence. Yet, I cannot deny that there are still serious problems to be worked out involving the rural service

obligation of many of our Independent telephone companies.

And so, even while we welcome evidence of a co-operative spirit at the top level of REA, we still watch with some concern the advent of new co-operative organizations in service areas where conflict and competition may eventually develop. This is a problem which will certainly not be finally determined during my few remaining months at the helm of the U-S-I-T-A. It is a responsibility that is going to command our constant efforts for several years to come.

This much we know: The American farmer wants telephone service and he is entitled to telephone service on a self-supporting rate basis. Anything we, as an industry, can do on that basis to lessen the gap between supply and demand in the rural telephone subscriber field will probably be of more lasting importance during the next few years than ever before in our long operating history.

The other problem I have in mind, which is now in what might be called a critical stage, involves the telephone industry as a whole, both Bell and Independent companies. I refer to the regulatory problem developing before the Federal Communications Commission with respect to allowing public agencies and private non-communication industrial companies to operate their own intra-system services via microwave or leased radio relay facilities.

I am glad to report to you that our U-S-I-T-A moved in promptly when this situation first made its appearance, in the form of a petition by the state of California for a change of FCC rules so as to permit it to continue a state-owned system of communication services on certain frequencies previously earmarked by the commission for other purposes. What happens to that particular proceeding, I am informed, will not necessarily be conclusive on this general over-all question of allowing non-communication agencies, public or private, to sneak in the backdoor of the telephone business via microwave or leased radio facilities.

What the Federal Communications Commission decides to do about this matter of the basic controlling policy may well crystalize within the next year. Furthermore, it is likely to be a pattern which could affect the long-range economic security of our traditional land-wire telephone communication industry for many years to come.

GEORGE PERRINE (left), chairman of the Illinois Commerce Commission, with SENATOR ARTHUR E. NELSON, Chicago. Senator Nelson observed his birthday during USITA conference.

I do not think that I am overstating the importance of this issue when I say that we stand today at the crossroads of important policy determination. Will the FCC turn to the right road, in the direction of true conservation of the radio spectrum, by utilizing the facilities of regularly organized commercial communication companies, including our independent telephone companies? Or will the other road be followed — one which would allow valuable radio frequencies and channels on our ever-shrinking radio spectrum to become burdened with commitments for more or less uncontrolled activities of non-communication businesses, operated for private interest? That would also be the road leading to the even more questionable adventures of states and cities and other public agencies into communication operations.

To illustrate this point further, I would use that figure of speech, about the roadway, in a little different way. I would suggest that the various channels and usable frequencies of the radio spectrum are like highways — government highways. They are public property. They exist for the use of all. But they must be regulated and policed to avoid possible abuses. Now, we know from the traffic jams, which complicate the city streets and highways of our country, that the orderly and efficient use of these thoroughfares is of prime importance. We know that public interest and convenience is best served when these highways are used most economically and efficiently by common carriers, which serve the public on a utility basis. We know, also, that public interest is not served if these highways are given over to the unrestricted and indiscriminate use of special classes, making unnecessary traffic demands and congestion.

So, to get back to this comparison with our telephone business, may I suggest that the public interest in the radio communications field will be best served to the extent that reliance and responsibiliy are placed upon the established, regulated telephone companies and other "carriers." Only in this way can the whole public, and not just part of it, be served and served well. We earnestly hope that the regulatory authorities, especially the Federal Communications Commission, will follow this course. And on our side, may we resolve that the telephone industry will not be found lacking in meeting this challenge of new responsibilities in filling our public service obligations.

In short, it is going to take all the resourcefulness of the best brains the telephone industry can mobilize to make it crystal clear to the FCC, and anybody else with a controlling voice in this matter, that the over-all public interest lies in making the fullest use of the co-ordinated facilities of established communication companies. This presents another situation, wherein we are fortunate in having, at the present time, a climate within the FCC which we have no reason to feel is hostile to established private enterprise. There may have been times in the past history of the FCC when some question could have been raised along that line. But the final proof of the pudding will be what the FCC finally decides to do and what will stand up on appeal to the courts of last resort if appeals are taken.

National Advertising

NOW, I HAVE left until this point, one other development which I, personally, think may even prove to be the most important event to have taken place, while I am filling this office. I refer to the decision which has been made and the steps which have been taken to carry out the mandate of our association for the establishment of a national advertis-

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Members of this USITA Conference group are (l. to r.):— FRANK BOHN, Fort Wayne, Ind.; CLIFF McCORMICK, Terre Haute, Ind.; DEWITT GIBSON, Chicago; WESLEY H. LOOMIS, III, Kansas City; and IKE DEVOE, GEO. P. BARNEY, JOHN McKINZIE, and KENNETH LAWSON, all from Lincoln, Neb.

Toll Compensation Studies Go Forward

By W. ROY JARMON*

Toll Compensation and Settlements Committee Chairman Jarmon reports progress in committee's endeavors to negotiate adjustments in the compensation.

AT THE LAST Executives' Conference in May, 1953 at the Edgewater Beach Hotel in Chicago, I was pleased to report that negotiations with representatives of the Bell System had resulted in toll compensation increases of approximately $18,000,000 a year to the Independent companies as a whole. These increases, obtained through the combined efforts of the entire telephone industry, were expected to bring total compensation related to message toll business interchanged with Bell companies to about $113,000,000 for the year. Data recently made available to the Toll Compensation and Settlements Committee show that almost $116,000,000 in revenue was actually received from this source during 1953.

At this time is is gratifying to report to the leaders of the Independent telephone industry, additional progress in our Committees' endeavors to negotiate adjustments in toll compensation. Members of the Committee and the Subcommittees on Separations and Extended Area Service have maintained busy schedules. The Subcommittees' progress is summarized in the accompanying separate reports to the Conference. I recommend these reports as deserving your thorough review. The persistence and hard work of the Commitees, as well as the cooperation of all companies participating in the studies, and the competent technical assistance of our Consulting Engineer, Lewis T. Hayner, merit our enthusiastic commendation.

I am pleased to report also that Edwin M. Blakeslee has kindly consented to serve this Committee on an emeritus basis. His counsel and advice have continued to be most helpful. Mr. Blakeslee, as you know, is president of the General Telephone Company of California, and formerly served both as the long-term chairman of this Committee and as president of the USITA. We are fortunate also that Elnathan Gates, of the Minnesota Telephone Co., has accepted appointment as a regular member of the Committee in the place of Warren B. Clay, who now, as president of the USITA, serves our Committee in an ex-officio capacity. Other members of the Toll Compensation Committee are: Ranford Dunlap, Telephone Services, Inc.; A. L. Hart, United Utilities, Inc.; William C. Henry, Northern Ohio Telephone Co.; R. W. Shriner, Peninsular Telephone Co.; and D. T. Strickland, Southwestern States Telephone Co.

Now, returning to our current program, I wish to sum-

**Mr. Jarmon, chairman of the U-S-I-T-A Toll Compensation & Settlements Committee and president of the General Telephone of the N. W., Spokane, Wash., presented this paper at the 1954 U-S-I-T-A Executives' Conference.*

marize briefly the activities of each of our Committees, and indicate progress made since the report submitted at the USITA Annual Convention last October in Chicago. You may recall that the Board of Directors at that time approved the EAS Subcommittee's recommended "Basis for Extended Area Service." This plan for EAS settlement arrangements received wide publicity throughout the industry. The Subcommittee, in its separate report, (*See Page* 95) has outlined the extent to which settlements are now being made on the basis which it recommended. This Subcommittee will continue its efforts towards adoption, to the extent feasible, of a uniform plan by all companies.

With regard to message toll settlements, there are several problems to which our Toll Compensation Committee, and particularly the Subcommittee on Separations, has devoted much attention during the past year. Three of these problems are of extraordinary significance to all of us at this time. *The first* relates to the compensation for toll line, or line haul, facilities; *the second* pertains to further development of separation procedures and instructions; and *the third* concerns the increase in the cost of performing both "A" and "B" toll functions since the year 1951 study test period, which served as the basis for last year's increase in compensation.

Perhaps the simplest way to present these problems to you would be to review first the various functions performed by the Independent companies in connection with the toll traffic interchanged with Bell System companies. The use of local exchange facilities when making toll calls, including the subscriber line plant and station equipment and the exchange portion of the central office equipment and buildings, as well as the billing and collecting of the messages, is known as the "A" function.

This is a service that each and every Independent company performs in originating and terminating interchanged traffic. Many Independent companies in addition perform the traffic work of ticketing and timing the interchanged calls and provide the associated toll facilities. This service is referred to as the "B" function.

In addition to the "A" and "B" functions, numerous Independent companies also own and operate toll lines or circuits that connect with the Bell companies' toll facilities. This is known as the "line haul" function.

The pattern of toll settlements developed over the past years allows separate compensation per message, namely "cents per message," for each of these three functions based on nation-wide averages measured in terms of average revenue per message; that is, schedule "A," schedule "B," and line haul prorate. The trend during recent years, however, has been towards the development of cost data by individual companies to serve as a basis for negotiating settlements for the functions they perform.

The total compensation received by Independent companies from interchanged toll traffic with Bell companies for each of these three functions for the years 1952 and 1953 are summarized as follows:

	1952	1953	Dollar Increase
"A" Function Compensation	$53,436,000	$ 60,430,000	$ 6,994,000
"B" Function Compensation	29,795,000	42,180,000	12,385,000
Subtotal	$83,231,000	$102,610,000	$19,379,000
Line Haul Function Compensation	13,501,000	13,229,000	(272,000)
Total	$96,732,000	$115,839,000	$19,107,000

( ) denotes decrease

It is gratifying to note the substantial over-all increase in the Independents' share of the revenues as reflected by the foregoing data. It is also encouraging that the line haul function compensation declined only $272,000 rather than $1,500,000 as anticipated during our February 1953 negotiations with the Bell representatives.

Several factors contributed to the improved showing over the earlier estimates relating to total compensation. Those that might be mentioned include changes in the characteristics and volumes of the interchanged traffic, limited offerings of "Supplemental B" payments, changes in the level of the interstate toll rates and intrastate rates for some seventeen states, and individual settlements by certain companies on a cost basis.

You will recall that, as reported at the Annual Convention last Fall, the Board of Directors authorized the establishment of the Subcommittee on Separations to undertake studies relating to the line haul problem, and also to develop much needed, more complete USITA separations procedures and instructions. Progress of the studies is outlined in this Subcommittee report, (*See Page* 52) which I have previously mentioned. It is an objective of the Subcommittee to make available separations procedures and instructions to companies desiring to undertake full cost studies as a basis for negotiation of individual settlement contracts, and wherever practicable to simplify the procedures. This certainly should be a real contribution to the telephone industry.

It is hardly necessary to point out to toll line companies the inequity of the present method of prorating line haul revenues. This inequity is indicated to a considerable degree by the foregoing comparison of compensation received by Independent companies during the years 1952 and 1953. It is well recognized that the Independents' cost of furnishing and maintaining toll lines has substantially increased along with the increase in the cost of performing the "A" and "B" functions.

The Separations Subcommittee, with the objective of arriving at full line haul costs related to the interchanged business on the basis of 1953 investments and expenses, mailed a post card questionnaire to Independent line haul companies earlier in the year inviting participation in the study.

A smaller number of companies, on indicating their ability to participate, were mailed a second questionnaire in March. With the aid of the information contained in this questionnaire, and the cooperation of the American Telephone and Telegraph

Company, a final study questionnaire has been designed which will furnish the Subcommittee, as well as the Bell representatives, the information required to analyze the problem of toll line compensation from various angles, including testing the validity of the presently used weighting factors. This information will then be used as a basis for further negotiations with the Bell people.

At a meeting on March 5 in Chicago between our full Committee and representatives of the A. T. & T. a need was recognized for further review of the contour and level of the "A" and "B" settlement schedules based on experienced 1953 investments and expenses.

As you may recall, the present schedules are based upon studies of the year 1951 investments and expenses adjusted for changes in 1952 wage levels. Needless to say, we have all experienced further inflation in our telephone operations since that period.

It is planned to assemble sufficient data for the 142 "A" exchanges and 102 "B" exchanges which were previously studied, to permit such adjustment in the schedules as may be necessary to reflect higher 1953 costs. The Bell representatives have agreed to furnish corresponding data concerning additional revenue produced by the new and higher level of toll rates, and to cooperate fully in the review. A simple form questionnaire is being designed and will be forwarded in the near future to the participating companies.

Each company taking part in the studies is urged to complete promptly, the questionnaires which are being distributed. If any company should experience difficulty in meeting deadlines for the return of required information, it may receive assistance by contacting a near, larger Independent company, its Bell connecting company, or the local Independent Telephone Association.

If additional assistance is required, Clyde Bailey's office in Washington, D. C. or members of the Toll Compensation Committee and Separations Subcommittee will be more than willing to help. It has been indicated that the Bell Associated companies will give full cooperation towards prompt completion of their portion of the studies. I am certain that the Presidents and Secretaries of each local Association join the Officers and Board of Directors of the USITA and members of this Committee in urging careful and prompt completion of these study forms.

Report of

Subcommittee on Separations

TO THE TOLL COMPENSATIONS AND SETTLEMENTS COMMITTEE:

FOLLOWING THE Annual Convention of the United States Telephone Association in October, 1953, at which a progress report was made, members of the Subcommittee met with Bell representatives and laid plans for the issuance of questionnaires and development of procedures for line haul cost studies. Much has since been accomplished toward these studies and the revision of the USITA Separations Manual, for which the Subcommittee was appointed.

For the purpose of determining which of the Independent companies could participate, at least to some extent, in making line haul cost studies, a four-question post card questionnaire was sent out to each company owning toll lines over which messages were routed to Bell System points. A total of 1,268 questionnaires were sent and 503 replies received, of which 406 companies indicated they would assist in any way they could. A review of those not replying indicated at least 166 additional companies should and could probably be of material assistance in making the study.

A second questionnaire, requesting toll circuit and exchange information necessary for selection of study line haul routes, was sent out March 15 to some 570 companies. As this report is written, 136 replies from companies having a total of 2,177 exchanges have been received. However, for nationwide distribution, they are far too few in number for the Subcommittee to proceed with selection of toll circuit study routes. Companies who have not responded are urged to do so, so that the Subcommittee will not be unduly delayed in carrying out its assignment.

Progress is being made toward revision of the USITA Separations Manual to reflect the use of the new traffic coefficients; provide for introduction of equipment for operator and customer toll dialing; add procedures for obtaining investment and expense for toll line haul; and simplify the entire procedures to the extent practicable. Separate simplified procedures are being written for the nation-wide toll line cost studies.

Two meetings for the full Subcommittee have been held in Chicago, with Bell representatives participating part of the time. Other meetings were held in New York, Washington, D. C., and Chicago, between certain Subcommittee members and some Bell representatives. As a whole there has been excellent cooperation between Independent and Bell representatives in working out these joint problems.

Respectfully submitted,

SUBCOMMITTEE ON SEPARATIONS

R. W. Shriner, Tampa, Fla., *Chr.*
A. W. Lambert, San Francisco, Cal.
Paul Lashmet, Chicago, Ill.
H. W. Pike, Springfield, Ill.
Allan R. Stacey, Sunland, Cal.

Interchanged Toll Business Must Be Profitable

EARLY resolution of these toll settlement problems is of vital importance to every Independent telephone company — in fact, to the entire telephone industry. Let us review some of the reasons why.

This interchanged toll has become a substantial part of our over-all business and an increasingly significant source of revenue to the Independents. For example, in 1935 the Independents' share of revenue from interchanged traffic was less than $12,000,000. By 1953 this share had increased to almost $116,000,000. Originating messages related to this business increased from 68,900,000 to 283,085,000 during the same per-

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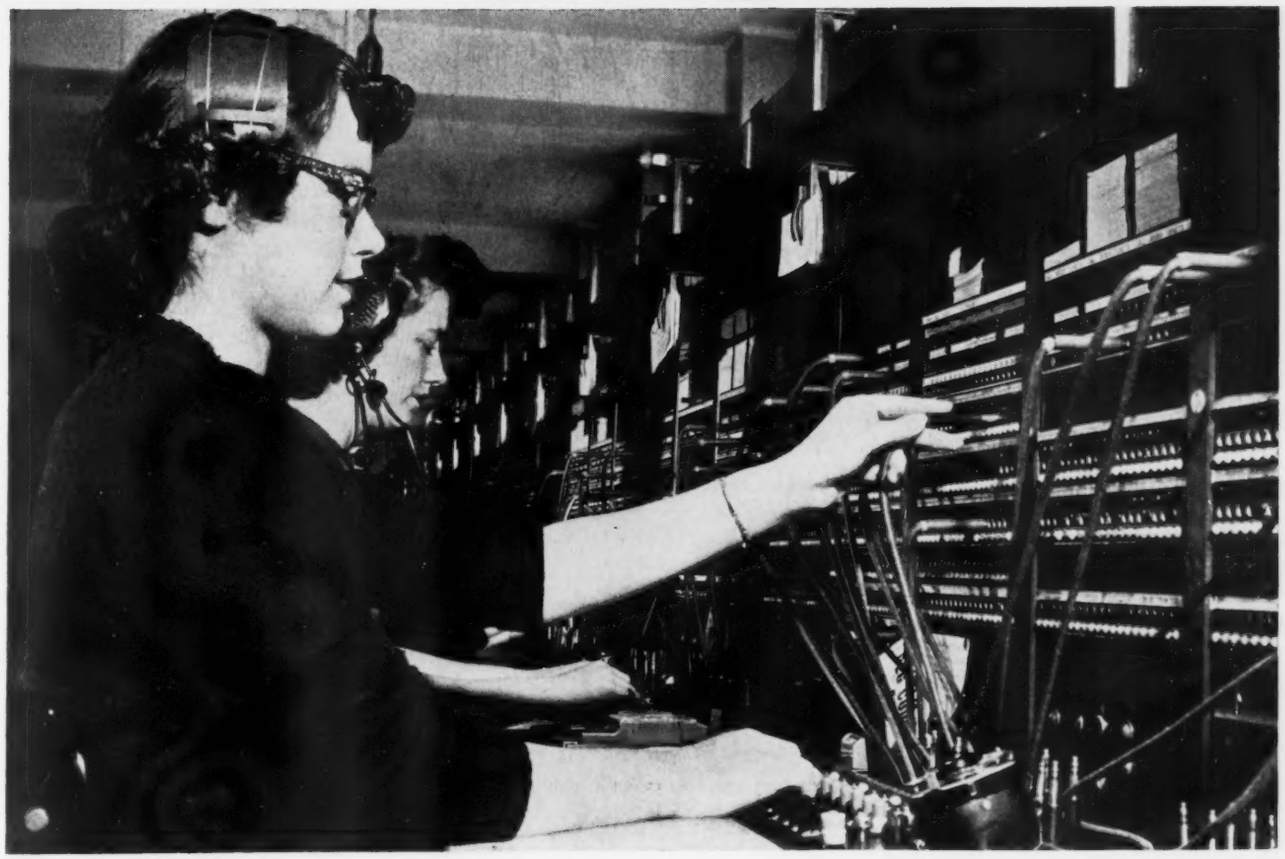

TO BE A SUCCESS an operator must feel that her efforts are important, for when she feels she is needed she is more likely to cooperate fully in all phases of her work life.

Blueprint For A Traffic Force

By Ruth E. Richards

HEAVY, HEAVY hangs over thy head — fine or superfine," etc., so goes the old parlor game, — "and what shall the owner do to redeem it?" "It" in that case, is a tangible object, in our analogy, a desired result. Have you felt at times that the task of training a new employe hung heavy in your work program and that your desire for a "fine" or "superfine" result was difficult to attain?

In this portion of our "Blueprint" we carry on to the "information" part of induction and training. These two phases of introduction to the job are so intertwined that it's hard to say, really, where one leaves off and the other begins.

Recognize that the principles which we outline apply just as truly in a small office as in a larger one. Of course, we realize that in a small community the "getting to know you" part of induction has been taken care of by the very limits of your town: you may have known your new employe since she was "knee high." Nevertheless, as an operator there are facts about her new job that should be explained — items such as "Secrecy of Communication," to be stressed.

Even though yours may be such a small community, if the traffic department is separate from the business office and the new employe has had no reason to be familiar with the building, the induction process will include acquainting the new employe with the facilities she will use, the women's lounge and locker room. Office customs should be explained, such as where purses are kept, whether employes may leave the building during relief periods, the places where smoking is permitted, and where personal telephone calls may be made.

Initial Training

DURING THE employe's first days of employment, when her whole effort is directed toward learning the work, information supplied to her will be largely facts about working practices, such as the day she will receive her pay, the period covered by the payment, the deductions required by law, etc.

If the traffic employes of your company are represented by a collective bargaining organization, discussion relative to the Union should

EXHIBIT ONE:—TRAINING OUTLINE FOR LOCAL AND TOLL OPERATORS

Combined Operating

CALLS TO BE TAUGHT

Call No. 1 Local—Completing Call to OK Lines and Stations.
Call No. 2 Local—Busy Lines — Don't Answer — Out of Order.
Call No. 3 Local—Call to Rural Lines.
Call No. 4 Toll—Recording and Completing a Direct Circuit Station Call.
Call No. 5 Toll—Person Call to Direct Circuit Point.
Call No. 6 Local—Call affected by multiple marking.
Call No. 7 Local—Call received by Name — Information Call.
Call No. 8 Local—Action on Supervisory Signals.
Call No. 9 Local—Miscellaneous Requests — Repair Service — Free Service — Long Distance.
Call No. 10 Toll—Direct Circuit Call — Report of BY — Address Name Call.
Call No. 11 Local—Bell Rang Report — Reverting Call — Rural Customer Calling on his own line.
Call No. 12 Toll—Direct Circuit Call — DA Report — OD Report — Assisting Customer to Place his own call.
Call No. 13 Local—Cut-off — Wrong Number.
Call No. 14 Toll—Person Call — Report of U ½ Hr.
Call No. 15 Toll—Inward and Through Calls.
Call No. 16 Toll—Collect Call — Charge Accepted.
Call No. 17 Toll—Person Call — U Definite Time — FC.
Call No. 18 Toll—Person Call — U Indefinite Time.
Call No. 19 Toll—Quoting Rates and Charges.
Call No. 20 Toll—WH Party Reports.
Call No. 21 Toll—AG Requests.
Call No. 22 Toll—Tributary Calls to This Office. (Offices ticketing calls for other points.)
Call No. 23 Toll—Tributary Call to Direct Circuit Point. (Offices ticketing calls for other points.)
Call No. 24 Toll—Call to One-Switch Point.
Call No. 25 Toll—Collect Call — Charge Not Accepted.
Call No. 26 Local—Coin Box Call
Toll—Coin Box Call
Call No. 27 Toll—Direct Circuit Call — NF and DS Report — CA Request.
Call No. 28 Local—Emergency Call
Toll—Emergency Call
Call No. 29 Toll—Changed No. — No such number.
Call No. 30 Toll—NC reports.
Call No. 31 Toll—Built-up Circuit.
Call No. 32 Toll—Through Switch.
Call No. 33 Toll—Call Charged to a Third Station.
Call No. 34 Toll—Messenger Calls.

EXHIBIT TWO:—TRAINING OUTLINE FOR LOCAL AND TOLL OPERATORS

Combined Operating

DRILLS	Given Initially
Drill No. 1 — Equipment Drill	1st Day
Drill No. 2 — Handling Equipment Drill	1st Day
Drill No. 3 — Voice Usage Drill	1st Day
Drill No. 4 — Multiple Drill	1st Day
Drill No. 5 — Ringing Drill	1st Day
Drill No. 6 — Memory Drill	1st Day
Drill No. 7 — Observation Drill	1st Day
Drill No. 8 — Distant Place Drill	1st Day
Drill No. 9 — Abbreviation Drill	2nd Day
Drill No. 10 — Reading Clock Time Drill (For offices having timing clocks)	2nd Day
Drill No. 11 — Stamping Ticket (For offices having calculagraphs)	2nd Day
Drill No. 12 — Reading Time Drill (For offices having calculagraphs)	2nd Day
Drill No. 13 — Toll Circuit Multiple Drill	3rd Day
Drill No. 14 — Time and Charge Drill	4th Day
Drill No. 15 — Coin Box Drill	7th Day
Drill No. 16 — Dialing Drill (For offices having Dials). This drill will be included in the daily program at a point where the operator has need for it.	

be included in the first day's introduction to working conditions.

Items which you will want to include in the "information" column of your induction program are:

Secrecy of Communication — Discuss during initial training. Perhaps the greatest emphasis should be put upon the fact that this secrecy of communication is not just a company policy, but that federal and state laws make violation of it, an offense with severe penalties.

Safeguarding the service is the duty of the company and of every employe. Privacy is one of the essential features of good telephone service and operators can feel pride in being faithful to the trust imposed in them. Even though certain information may become known to them through handling calls, such information should be forgotten outside the office even though it might provide interesting conversational matter. Care must be exercised not to mention: (1) that there has been a call from one telephone to another; (2) the nature of the call, or (3) any part of the conversation.

During the initial training period there should be brief discussion about: (1) Attendance and punctuality; (2) Sunday and Holiday work; (3) company policy on overtime, and (4) reporting absence and delay.

When we use the term discussion it is not our thought to imply that a lengthy talk on each subject will be aimed at the new employe.

In the small office the Chief Operator will frequently be the one who does the training of new people. The items we have mentioned will be covered quite naturally during the working day in a conversational manner, perhaps before going to the switchboard for practice, or prior to or at the end of a study session.

If a supervisor is delegated to do instructing, the Chief Operator may choose to have her cover some of the items, but the Chief Operator should assume the responsibility for the program and should make some of the contacts herself. If the responsibility for informing the new employe is shared, there must be consistency in what is told to new employes.

It is suggested that this outline of points to be covered be regarded merely as a guide. The emphasis

should be on an interesting and natural discussion, neither a routine nor a ceremony. A friendly attitude will put the employe at ease so she can listen attentively. She should also be given an opportunity to ask questions.

The new employe will be naturally curious about persons who come into the traffic department, company officials, switchboard maintenance men, visiting supervisory people, etc. During the first few days there may be a brief explanation of the traffic department and the work performed by the various employes. This will apply especially if there are supervisory and clerical people on the force.

During the first few weeks new employes get a pretty good picture of the central office organization from observation and co-workers but there should be some plan for informing her about the other departments, their functions and supervisory personnel.

If your exchange is one of a group operated by your company, the employe should be given a simple outline of the company organization, the scope of its operations and its key management people. Such information given to the employe by her own supervisor (not acquired on a catch-as-catch-can basis) will do more to make her feel that she is part of a fine group than most any other thing. In addition, it assures she receives accurate information.

Outline For Training

EVERY CENTRAL office employe needs training from the day she enters the service until the day she leaves it. The student must learn the fundamentals of operating. The trained operator should strive to become more proficient in her job; to learn new methods as they are introduced; and to learn as much as possible about other jobs on a higher level so as to prepare herself for advancement. Training of employes is considered a regular part of the supervision of an office.

The training of operators is divided into two phases:

(1) The initial training which prepares the new operator to take up her work.

(2) The subsequent training which includes all training she receives after she is assigned a regular trick.

EXHIBIT THREE: — INSTRUCTORS' TRAINING OUTLINE FOR LOCAL AND TOLL OPERATORS

Combined Operating

Drill No. 1 — Equipment Drill

Where Conducted—At the Switchboard

(1) Adjustment of headset.
(2) Connecting headset to position.
(3) Proper way of taking and leaving position.
(4) Chair adjustment.
(5) Listening Key — operation.
(6) Cord selection and rotation.
(7) Cord used for answering.
(8) Cord used for calling.
(9) Arrangement of subscribers' lines.
(10) Key — method used for ringing.
(11) Operation of supervisory signals — drops or lamps.
(12) Proper method of picking up and releasing cords.
(13) Changing receiver at approximately 1 hour intervals.
(14) Wrapping and storing headsets.

Demonstrate and explain and then by questioning have student demonstrate.

Initial Training objectives:—

THE TWO MAIN objectives of initial training are:

(1) To prepare the student to handle ordinary calls as soon as possible.

(2) To prepare the student for the further training required to become an expert operator.

Training Period:—

THE INSTRUCTOR who trains the new operator has a big responsibility. She should be a person who is calm, patient, and understanding. She should be interested in the new employe as an individual; she should realize that all students do not have the same degree of ability to learn, therefore patience and extra effort must be expended on those who are slower to learn. Impatience at this point is often the cause of students failing to report for work or leaving before the training is completed, and usually giving "nervousness," "needed at home," etc. as the reason when the real reason was that they were made to feel (unintentionally on the part of the instructor) inadequate for the job.

Order of Learning:—

EASE OF LEARNING is the most important factor in determining the learning sequences of operations. Each call is considered from the standpoint of associations built up by previous calls or by general past experience. To schedule the various operations in such order that the student can operate with some assurance before taking up the more complicated parts of her job is of the utmost importance. This plan permits the student to acquire proficiency more rapidly and enables her to master such basic operations as handling plugs and keys, locating subscribers lines and ringing code rings, before taking up more difficult operations.

Operating Technique:—

IN LEARNING THE essentials of operating covered by this initial training outline, the students should be trained in the fundamentals of operating techniques as well as in operating methods. This includes the technique of handling plugs, operating keys, disconnecting, and also the commonly used technique of teamwork and overlapping. It is not expected that the student will become expert in these features of the work during her initial training and the development of this phase of the work will be continued after her assignment to a regular trick.

The training interpretation of operating technique is that it refers to the manner of performing an operation but not to the act of performing it. For example, the act of passing a cord is a practice but the manner of grasping the plug, extending the arms, etc. is technique.

Drills:—

DRILLS ARE GIVEN to the students to help them learn certain operations which can be learned to the desired point only by many repetitions. These drills must be given intensively in order to keep the students at a high degree of concentration required to help them form good operating habits. Discussions or corrections should be avoided during drill periods.

In order to avoid tediousness and loss of interest it is important that drill periods be kept short (usually 5 to 15 minutes) and the instructor should avoid repeating the same drill until at least an hour has elapsed. The instructor should give each student the number of drills which she

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Then . . . when you demonstrate the handy generator crank . . . when you show how the same telephone is a wall or desk model . . . you prove that you are going all out to bring your town the finest telephone service available.

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You can stock fewer telephones, because every instrument fits every installation requirement. You can use this Leich 900 magneto telephone for wall or desk installations without adding or changing a single thing.

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Remove the generator, change a few spade connections and this Leich 900 becomes a regular common battery telephone. It's easy to add a dial too. Your investment in this magneto telephone is always good.

FEWER MAINTENANCE TRIPS
Tens of thousands of these Leich 900 magneto telephones are now in service. They have been thoroughly proved on the job. They're carefully built of the highest quality materials. Write today for complete information.

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GENERAL TELEPHONE SYSTEM TELEPHONE

actually requires, and should not attempt to keep any record of the student's mistakes when a drill is in progress. The student needs habit forming experience and her performance during practice periods indicates her need for additional drills.

Concentration On Essentials:—

THE INSTRUCTOR should not expect proficiency in all details when the student is first learning and handling a new call. At this time she emphasizes the important parts of the call, leaving the less essential parts until the student understands the essentials. For example, in handling a local call the essential parts are answering, obtaining the correct order, establishing the connection to the proper line, and ringing. The phrases, cord handling, etc., are not as important as getting the call through correctly.

A certain amount of awkwardness is to be expected on the part of the student but this will disappear with practice. The various drills will be found helpful in aiding the student to develop smoothness and ease in operating.

Incidental Learning:—

THE STUDENTS WILL learn many useful things by observing other operators while practicing and working among them at the switchboard. This is easy and natural and requires no urging or direction by the instructor. She should avoid doing or saying anything which might interfere with this incidental learning. She should permit the students to handle calls or perform operations which they have learned by themselves even though these operations have not been covered in the training and in discussions should commend the student for having learned them. It is important therefore, that the positions on both sides of the student be occupied by the most expert operators in the office, so that they will be examples for the students.

Instructor's Training Program:

THE TRAINING program outlined in Exhibits One, Two and Three is intended to outline for the instructor the essential steps of the job in the order in which students are to learn them. It is not intended that the training material will be read by or quoted to the student.

"QUOTE"

"This is the hour of decision. We are at the crossroads. We shall have to determine whether we shall take the road toward freedom, competitive capitalism, sound money and self-government or the road toward inflation, destruction of our fiscal system, bigger government, and eventually statism."—(Pampa, Texas, Daily News).

In order that the time assigned to training may be used most effectively, a program is prepared for each day of the training period. The instructor should understand that she is expected to modify the program according to the needs of the individual students.

The training may be started any day of the week depending upon such conditions as the force conditions, length of the course, availability of positions for training, etc. The instructor may find it desirable to take time allotted to some discussions and drills and add it to others, or in some cases she might add time saved to commercial operating. Also due to inability to secure a position during the busier hours for practice, the instructor may use that period for discussion or drills scheduled for a later hour and schedule the practice period when a position can be obtained.

Further Training On The Job:—

THE NEW OPERATOR who has just finished her initial training will have little or no knowledge about many operations which occur on the regular job. These are conditions which would delay or impair her initial training unnecessarily if included; they can be learned to better advantage as the operator works on the job.

The chief operator should continue the operator's training by presenting subsequent training lessons, service programs and using any other arrangements provided for the subsequent training of operators. Lesson on Call No. 1 follows. Next month we will give another lesson outline, other drills and related material to complete the work in combined operating.

Call No. 1:—

Completing calls to OK lines and stations.

Where conducted — Away from switchboard.

Material required — List of numbers and phrases to be used. Student's notebook and pencil.

(1) State type of call to be discussed.

(2) Give the phrases used in connection with this type of call. "Number, please?," "Thank You" (if appropriate) "all right, sir," "Yes, sir," "Yes, sir, I'll try again," "what number, please?"

(3) Have student make a note of the phrases to be used.

(4) Drill the phrases several times, checking voice usage.

(5) Explain the handling of the call.

(6) Drill students in a number of calls with the student taking the part of the operator and the instructor the part of the calling and called parties.

Vary the manner of placing the order for practice in different acknowledgement phrases.

Vary the numbers called so that both individual and party lines are called. After about a half hour of presentation, demonstration and drill, take the operator to the switchboard and have her handle commercial calls. Allow her to handle one call at a time. Observe the ringing. If voluntary supervisor is required, at this time instruct the student on ringing intervals and voluntary supervision.

At the finish of the conversation observe the method of disconnecting. Do not correct the student on irregularities until the connection has been taken down and confine corrections to those affecting the customer's service. Minor irregularities should be discussed at the time the next call is presented.

During the commercial practice permit the operator to take an increasing number of calls, at first waiting until the called party has answered on the first before taking the second call and waiting for a disconnect on the first before taking the third, etc. As she gains confidence permit her to take a second call when the first has been rung so that she will learn to give voluntary supervision on unanswered calls while

Please Turn To Page 92

New Angles In Construction

By V.G. RITTER*

"Today, the courage to try something new is of importance. There is no question that many old methods are still good—but as new improvements are developed, we should make an effort to merit their worth and utilize them to our advantage . . . "

IF YOU HAVE been reading current issues of the telephone journals, you have probably noted or read a series of articles entitled, "New Devices and Techniques" or "News on New Products." Since this paper will follow a similar subject, I have chosen the title "New Angles in Construction" for the Independents.

However, I do not propose to discuss all of the new methods and materials that are practical for use in the telephone industry. I will discuss the products of several manufacturers and I trust you will not conclude that there has been any partiality or intent to promote their products. Rather, it is my intention to present a few of the most recent developments that will save your company dollars.

The "Stranterm"

A PRODUCT of the Cook Electric Co. is the new Stranterm—and as the name implies, it is mounted on the cable strand. This terminal can be purchased with either a lead or plastic stub in the 11-pr., 16-pr. and 26-pr. sizes. The terminal housing is the same size for the 11 and 16-pr. unit. This feature permits the conversion of a 11-pr. unit to a 16-pr. by replacing the terminal core. This change may be accomplished by merely removing one mounting screw. Left and right hand cable entrance to the terminal box is also possible. The terminal cores are gas-tight and moisture proof.

The cover on the terminal is embossed and a phosphorous bronze spring clip is riveted to it. The clip is used to hold what is known as a minigap protector. This protector is a two carbon block type with an acetate dialectric providing the correct air gap. These protectors may simply be snapped in place to protect the pairs requiring the protection. Such selectivity permits this terminal to be protected or non-protected as desired.

The terminal has a neoprene self-adhesive gasket which replaces the old style gromet for drop wire entrance and a bell shaped cable nozzle reduces damage when the tail is subject to excessive bending.

In my opinion, this terminal provides very desirable flexibility, which of course, will further our efforts in plant economy.

New Line Wires

WITHIN THE past year two new telephone line wires have been developed. One is the HTL #190, a steel wire and the other is a Copperweld wire known as O-Eighty-Thirty. Both of these new wires are primarily an increase in tensile strength, thus making them more adaptable and desirable for long span construction.

Telephone wires of extra long span construction may be strung with the same construction practices used for regular telephone lines except that precautions must be taken to provide for greater weight of wire on the points of support and the higher line tensions. Poles should be guyed to withstand the increased tensions on the line wires. Poles should be located with respect to road crossings and other interferences so that if the wire sags under ice load, the wire will not obstruct traffic or be damaged.

Pre-Lashing Aerial Cable

ALMOST EVERY highway of any consequence is paralleled by a second highway — the highway of speech — the telephone line. Usually this is an aerial cable unless only a few circuits are involved.

Since we are adding cable each year and will probably continue to do so for many years to come, we are naturally interested in better and more economical ways of installing it. One of the most recent developments today is the system of "Pre-lashing Aerial Cable."

Briefly, with this method, a roller support is temporarily attached to each pole; the cable and strand are pre-lashed together and pulled into position under tension and transferred from their roller supports to their permanent attachments, the cable suspension clamps.

The heart of the new method is the pre-lashing gear which is mounted on the fore end of a large cable trailer. This gear combines a mounting for a standard cable lasher, a feeder for the cable and a means for tensioning the strand. A braking system must be equipped on both the strand and cable to control the tensioning and slack. The cable and strand are pulled through the lasher and over the temporary cable roller supports on the poles by a winch line from a truck at the far end of the pull. During this operation an observer equipped with a portable radio follows the progress of the

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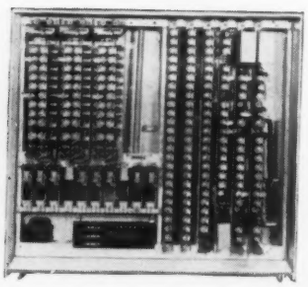
*Mr. Ritter, plant engineer of the Ohio Consolidated Telephone Co., Portsmouth, Ohio, presented this paper at the 1954 convention of the Ohio Independent Telephone Assoc.

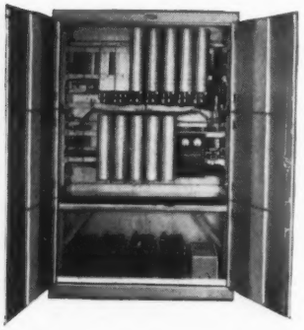
If subscribers in a small community selected their own automatic exchange, they would have only one requirement: *good service, all the time.* That's what it takes to keep them happy! And you're sure of it when you buy one of Automatic's dependable *switch-type* C-A-X's.

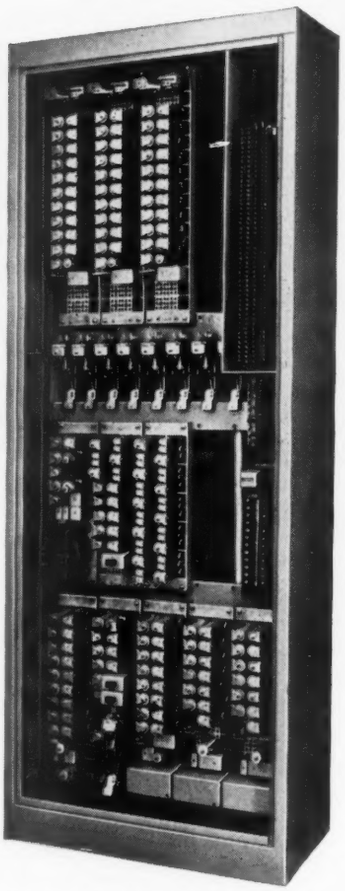


Type 36A1 C-A-X—Serves 19 lines with 10 telephones per line; up to 4 links, 3 trunks. Uses adapters on grounded lines. Employs rotary switch finders and connectors. Not expansible.

Type 46A C-A-X—Serves up to 50 lines with 10 telephones per line; up to 7 links, 8 trunks. Uses adapters on grounded lines. Can expand to 90 lines with 14 links.

Type 46B C-A-X—(Not illustrated) Similar to Type 46A but serves grounded lines without adapters. Allows up to 20 telephones per line.





Type 48A C-A-X—Serves 20 lines with 10 telephones per line; 4 links, 3 trunks. Uses adapters on grounded lines. Features "flash-busy" toll supervision, reverting calls by directory number, provides for postpay paystations. Employs Type 45 "100-year" Rotary Switch.

Type 48B C-A-X—(Not illustrated) Similar to Type 48A, but serves up to 40 lines with 6 links, 6 trunks.

AUTOMATIC ELECTRIC

Originators and Developers of the Strowger Step-by-Step "Director" for Register-Sender-Translator Operation . . . Machine Switching Automatic Dial Systems

Makers of Telephone, Signaling and Communication Apparatus • Electrical Engineers, Designers and Consultants

Distributors in U. S. and Possessions: AUTOMATIC ELECTRIC SALES CORPORATION
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U S A.

On keeping them happy

"It must please the *subscribers* as well as the telephone man." That was the word to our men as they set about designing each of Automatic's Community Automatic Exchanges.

Take Type 48, for instance. They built it around our "100-year" Rotary Switch — made it so sturdy it breezes through abuse which would be sure trouble for other equipment. That's why Type 48 provides dependable telephone service, *always*. And that's what keeps subscribers happy!

Type 48 offers many advantages: First, you'll find it refreshingly easy to install. Each model comes complete in one compact cabinet, and there are only a few connections to make. Then, Type 48's switch-type operation is so simple—its circuits so easy to trace—that even men with scant training can keep it working perfectly (and you know what *that* means in maintenance savings!). Finally, Type 48 provides for profitable paystations, remote alarm-checking, and the toll supervision required for nationwide toll dialing. It's up-to-date in every way!

Those who have tried Type 48 have been completely satisfied, and we think you will be, too. Write for Circular 1795 for full details on both 20- and 40-line models today. And check our full C-A-X line—we have a model to meet every need.

Send A Copy To Your Friends

. . . . . Without Charge

TELEPHONE ENGINEER
7720 N. Sheridan Rd.
PUBLISHING CORP.
Chicago 26, Ill.

Please send a free copy of the June, 1954, issue of TELEPHONE ENGINEER & MANAGEMENT with my compliments to the persons listed below:

To .....
Address .....
City ..... State .....

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To .....
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Sender .....
Company .....
Address .....

cable as it moves along. The winch operator and the prelasher operator are similarly equipped so that all three are in constant communication. This naturally assures control throughout the entire operation.

No doubt those of you affiliated with smaller companies may say, that's all good, but that set-up would be too expensive for the frequency of our usage — and right you are. However, it is possible that you may engage a contractor to complete a cable project — and if you would, the unit labor cost would be about 1/3 less. This reduction in man-hours, in spite of the fact that the method is relatively new and in a shakedown period, I trust will arouse your interest and future consideration.

Splicing Plastic Cables

AT THIS DATE I believe we have all concluded that polyethlene or plastic cables have a definite place in the telephone industry. However, there has been considerable reluctance to utilize plastic cables too extensively because of the splicing techniques. To date, none are really satisfactory. Most methods of splicing plastic cable have inadequate moisture proofing or adhesion qualities; and the labor hours required to complete a plastic splice are considerably greater than that for a lead splice.

This barrier is rapidly being overcome through a new chemical technique known as Epoxy Casting Resins. This is a method of mixing two compounds in a flexible plastic film envelope something like the former mixture of oleomargarine. One of the compounds is known as the resin, the other, a catalyst. They are separated by a thin rupturable membrane. This membrane, while being sturdy enough to permit rough handling, can be ruptured by squeezing one end of the envelope, thus permitting the mixture of the two compounds without error or special skill. Pouring of the resin can then proceed immediately around whatever component is to be insulated.

However, to assure uniformity of insulation around the conductor splice, a polyvinyl chloride mold, adaptable to the size of the cable, can be utilized. In addition to providing uniform insulation, the design of the mold permits rapid pouring without inclusion of air pockets. This mold is being developed on a basis very economical to the user and can be left in place as part of the splice.

This new resin, still in the experimental stage, has thus far proven tough and flexible. It has good electrical and mechanical properties and the ability to set hard in 15-40 minutes, depending upon the temperature. As soon as the resin becomes available for commercial use, it will be most applicable. First, in that the resin will be provided in a package with the exact proportions and easy to mix. Secondly, the resin will react rapidly without the need for external applications of heat. Lastly, the engineered mold to contain the resin around the conductor splice will provide uniform results by personnel having varying degrees of skill.

The information I have given you has been in part taken from a speech presented by E. W. Bollmeir, chief engineer of the Minnesota Mining & Manufacturing Co., at the Army Signal Corps Symposium. Mr. Bollmeier authorized me to pass on this information and indicated in a recent letter that considerable progress is being made along these lines.

I have covered only a few of the new methods and materials available for our use. There are many more. There is no question that many of the old methods are still good, but as new improvements are developed, we should make an effort to merit their worth and utilize them to our advantage. It is through this means that we can progress; thus making our industry a safer place to work and provide our subscribers with the highest grade of service.—THE END.

"QUOTE"

"The first sign that a nation is entering a period of deterioration is when the people begin to depend on the government for everything. The willingness to do for themselves has been an American tradition, but of late years we have seen the nation, the state, the community look to the government to help in everything."—(Knoxville, Iowa, Express).

Small Company Talk

Accounting For Pay Station Revenues

By Bill Corman*

How do you handle the problems involved in billing, collecting and accounting for pay stations? Here's a sure-fire system that works for the Southland Telephone Co.

HI, NEIGHBOR! In a previous *Small Company Talk*, we discussed some of the problems involved in billing, collecting, and accounting for pay stations. A few additional points need to be added, in order to clear up some questions that were referred to, but not fully discussed.

One of these questions that can cause some difficulty is, "When, during the month, should we rob the pay stations?" Let's first assume that all of our pay stations need to be robbed only once a month — that is, we assume that the amount of money put into any given station will not fill up the coin box and overflow during a one month period.

The least complicating date to rob a pay station is the day immediately following the close of the toll billing period. Many companies close their toll billing on the 20th of each month — that is, the toll billed to a telephone on June 1 will include only long distance calls made on or before May 20th. Moreover, this toll closing date usually coincides with the closing date on the toll settlement bill.

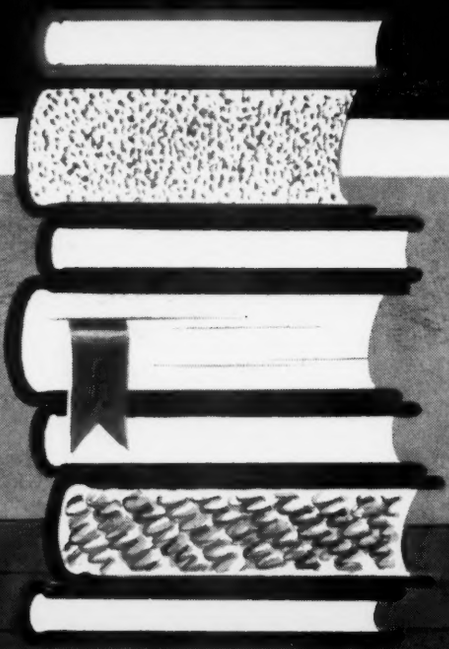
Thus, all the tolls billed to the customers on June 1, will include the calls they made from April 21 through May 20, and the toll settlement will be figured for that same period. And, in this case, the simplest time to rob the pay stations will be on the 21st of each month, which

Mr. Corman is manager of the Southland Telephone Co., Atmore, Ala.

IT'S A WISE CHILD...

Today even children in grade schools are wise in the ways of the telephone. The advertisement on the opposite page proves it. Their clear language reminds busy adults that the telephone is truly a faithful servant in every phase of home and business life.

The advertisement reaches customers of all the nation's 5100 telephone companies. It appears in June magazines that go out to readers in every company's territory throughout the U. S.

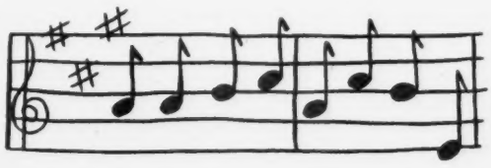


Telephones
are very
useful

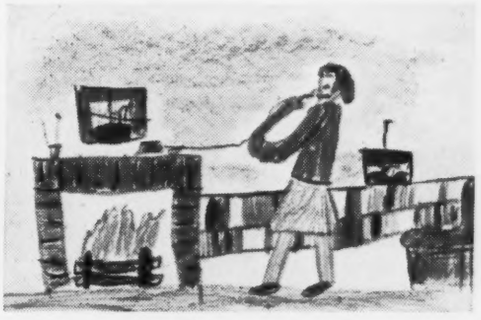
Alexander Graham Bell - inventor

Uses of the telephone -

A Business calls 1. Groceries
B Friendly calls 2. Medicines
C Ordering calls 3 Meats

Others, including military calls

(Tune - Yankee Doodle)

Telephones are very useful,
Of that we're aware.
So when you use the telephone
Just handle it with care.



When some one is in trouble you can call up people to help you. If some one is sick you can call the doctor. And if your house is on fire you call the fire department.

Some of the most interesting illustrations of the value of the telephone come from children. Here are a few, selected from many hundreds by grade-school pupils. They show imagination and a characteristic way of telling a story in a few words. Take, for instance, the words "Telephones are very useful."

We couldn't sum it up better than that in a hundred years.

Bell Telephone System

LOCAL *to serve the community.* NATIONWIDE *to serve the nation.*

will mean that the money collected will be for calls made from that station during the immediately preceding 30 or 31 days, which will tie in with the toll to be billed to that station during the regular billing process.

If more than one robbing per month is required, no particular difficulty is involved — the situation is the same as if some person with a regular telephone made two payments on his bill during the month. Each collection is recorded to the pay station number, but all the collections made during a month are accounted for as if they were all made at the same time. A difficulty does arise, however, if collections have to be made between the toll closing date and the billing date. Using the above example of a toll closing date of the 20th of the month, a difficulty does arise when the regular billing date is the 1st of the month, and a pay station collection must be made between the 20th (toll closing date) and the first of the next month (billing date). For whereas the regular collections from pay stations are made one month ahead of time, as was pointed out in the previous article, the collections we have just described would be *two* months ahead of time.

For example, still assuming our toll closing date of the 20th of each month, toll calls made from a regular telephone during the period April 21 through May 20 would be billed on June 1 and collected, normally, during the month of June. If one collection is made from a pay station, however, at the end of the period, then the collection will be made on May 21, or one month ahead of the time it would have been collected from a regular station. And if a pay station collection is made anywhere from April 20 through the 30th, then the collection is *two* months ahead of its regular time.

Methods of Handling The Difficulty

THERE ARE several methods of handling this difficulty. The simplest, if not much money is involved, is simply to hold the money in the safe and not mark it as a collection until after the first of the month. Another simple way is to go ahead and mark up the collection to some fictitious account set up for this purpose at the time the collection is made, and to transfer this amount from the fictitious account to the pay station account after the first of the month. There are dozens of other practical ways to do the job — all you have to understand is what you are doing, and why.

Which brings us to another question, not necessarily involved with pay stations alone — your method of accounting for toll revenue in the aggregate. Let's take our same situation above, where the toll closing date is the 20th. Calls made from April 21 through May 20 will be billed June 1. But what month is that revenue for? Actually, 10 days of it are April revenue and 20 days of it are May revenue; but different small companies consider it revenue for almost any combination of months, or any month, that you could guess. Some, most I would guess, consider it all to be May revenue, simply forgetting the 10 days of April. Some consider it June revenue — the month in which it is largely collected. Some few divide it up between April and May on a basis of 1/3 April and 2/3 May revenue. And some don't consider it revenue until it is collected, which might be anywhere from June on.

The Toll Settlement

TIED IN WITH this is the toll settlement. If the toll settlement is also for a 30 or 31-day period ending each month with the 20th, then the actual payment by your company of the toll settlement for the period April 21 through May 20 is usually made in June. And however you consider your toll revenue, you should consider your toll settlement in the same light. That is, if the April 21 through May 20 toll is considered as May toll revenue, then the toll settlement of that same period should be considered as an expense of May (or, more accurately, a reduction of the gross toll for May). But, if you consider the gross toll billed on June 1 as June toll revenue, then the toll settlement constitutes a reduction of the June toll revenue.

This same idea of consistency follows on through to the pay stations. However you handle your regular toll billing, your pay station billing and collection should be consistent with your regular billing. That is, money put into a pay station during the period April 21 through May 20 for long distance should be collected from the pay station in such a manner that it is recognizable as collections for that period, and applied against the bill on which those tolls are billed to the pay station. A method of doing this was described in the previous article.

Excise Tax Collection

NOW LET US turn to still another question that has not been touched on. This question concerns the excise tax on telephone service. Since there is no reasonable way to collect it, no excise tax applies to the local calls made for a nickel or a dime from a pay station. However, if the station is a semi-public type, then the excise tax does apply on the guarantee. That is, if the guarantee for a particular semi-public pay station in a given month is $5.00, then there is an excise tax due of 50¢.

How is this tax handled? Again, there are about as many ways of handling it as you care to name. The simplest way is to consider that it is a part of the guarantee, in which case, the guarantee on the station in question is $5.50 instead of $5.00. But, though that procedure is followed in many companies, it is neither theoretically correct nor fair to the telephone company, for if you follow the reasoning through, you will see that local call revenue (on which there is no tax) is being used to pay the tax, and that most of this revenue belongs to the company and not to the government.

Let's take an example. Suppose we have a pay station of the semi-public type over which, for the sake of simplicity in the example, no long distance calls are placed. The guarantee for a particular month is $5.00, and the revenue from that station for local calls only and for the same month amounted to $10.00. If we add the 50¢ excise tax to the guarantee, we then have a total guaranteed amount of $5.50, leaving an excess of $4.50. Normally, the customer would receive 25% of the $4.50 as a commission, or $1.13. The company would pay the government the 50¢ excise tax, and thus would have collected $10.00 from the pay station, and paid out $1.13 plus 50¢, leaving $8.37 actual net for the company. But it is clear that the 50¢ is paid by the company out of money that should be 75% its own revenue (the other

25% being paid by the customer in the form of reduced commission).

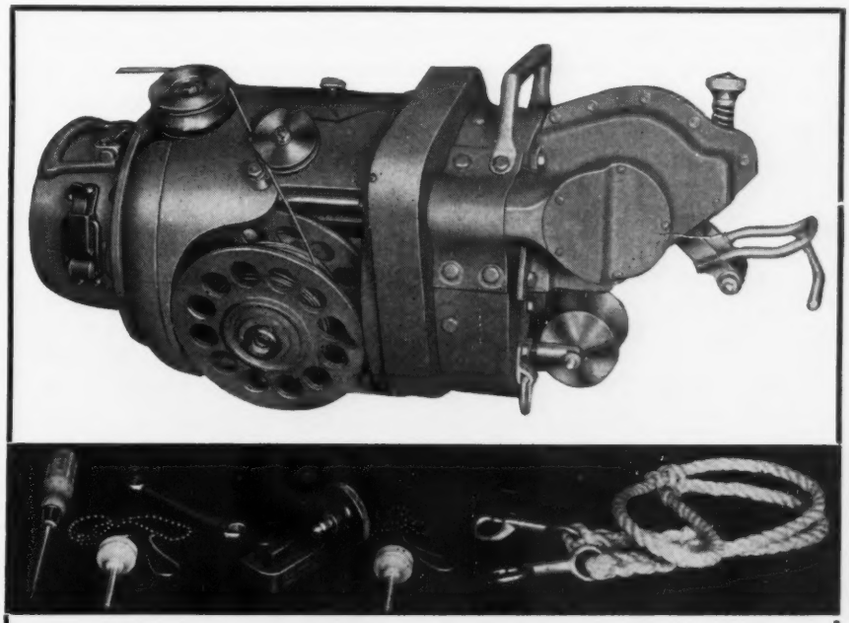
Most companies, I believe, handle this tax a bit differently. They go on the theory that, with semi-public pay stations, the customer actually owes the company the rental guarantee, and the government the excise tax, just the same as any regular subscriber. For the excise tax, of course, is a direct tax on the subscriber, not on the telephone company. These companies then, figure it as follows: In the above example where the guarantee is $5.00, the excise tax 50¢ and the collections from the station $10.00, the excess over the guarantee would be considered to be $5.00 ($10.00 total collections less the $5.00 guarantee). Thus the customer's commission would be $1.25 instead of $1.13 (25% of $5.00 excess rather than of $4.50 excess), but from this would be subtracted the 50¢ excise tax. This would leave the customer with a net commission of 75¢, the government with its 50¢, and the telephone company with $8.75 net.

On this same theory, if the collections from a station were less than the guarantee, a slightly different situation arises. Suppose the guarantee to be $5.00 again, and the tax 50¢, but the collections only $4.00. The customer obviously owes $1.50 to make up the guarantee and pay the tax — $1.00 to make up the guarantee and 50¢ for the tax.

There is another little area of possibility. Suppose that the collections were $5.60. There is a 60¢ excess over the guarantee, of which the customer is due 25% or 15¢, but he owes the 50¢ tax leaving him to make a net payment of 35¢.

On either type of pay station, public or semi-public, however, the excise tax does apply to long distance calls placed from the pay station. But, because nothing less than nickels can be handled by pay stations, the tax is computed to the nearest nickel. A 20¢ call from a pay station carries no tax, but a 25¢ call carries a nickel tax. Similarly, a 70¢ call also carries a nickel tax, but a 75¢ call carries a dime tax. No particular problem arises as a result of this, however, since the customer, or toll user at the pay station, pays the tax at the same time he pays for his call, and this money is in the amount collected from the pay station.

One other point may need some discussion, since different companies do it different ways. Most large companies, including Bell, do not figure a flat monthly guarantee for semi-public pay stations, but rather a flat daily figure. Then, to compute the rental guarantee for any particular month, they multiply the daily figure by the number of days in that particular month. Many small companies, on the other hand, use a flat monthly figure regardless of the number of days in any one month. There are advantages to both methods, the daily figure being more equitable and accurate, but the monthly figure being simpler and easier to use. This is a point which you should discuss and work out with your commission since it makes little difference to the telephone company.—THE END.



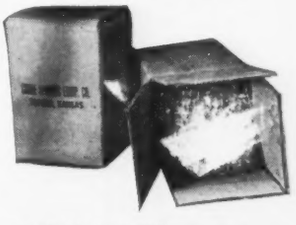
This Package Brings You Up to 67% Savings in Outside Plant Maintenance

When you specify spun cable to protect your outside plant investment, insist upon the Neale Model "D" Spinner. It comes to you complete, with all of the accessory tools to service and maintain the machine. And you can work toward a saving in outside plant protection of as much as 67 per cent . . . the experience of telephone companies in cable spinning, reported from all over the country.

Cable spinning is fast . . . economical . . . and practical . . . for new construction as well as maintenance. You get all the possible advantages of cable spinning when you equip your crews with Neale Cable Spinners. Both the Model "D," shown above, and the Model "B" One Man Cable Spinner are supplied to you complete in every detail . . . no extras to buy.

The Cable Spinning Company maintains an around-the-clock service in spare parts. For complete information on Cable Spinning tools, write or phone your jobber today.

For Best Results Use Neale Wire



Available in 7 different types . . . all made to meet the toughest construction and corrosion problems.

CABLE SPINNING
Equipment Company PHONE 2-7234
3100 TOPEKA AVE. TOPEKA, KANSAS

New Ideas Improve Job Performance

By JOHN G. REYNOLDS

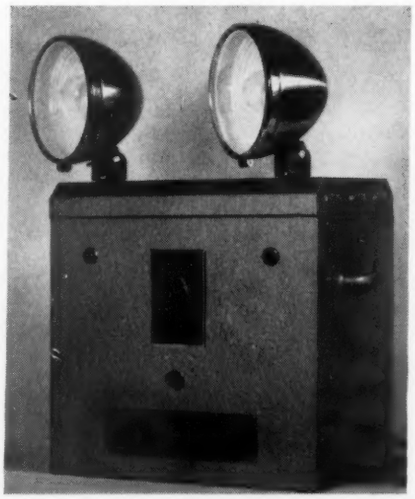
New Emergency Lighting Unit

THE NEW "Nicad" Emergency Lighting Unit has been designed to provide an auxiliary 6-volt light source which will come on instantaneously and automatically when the normal a-c supply fails. Heart of the unit is the "Nicad" steel encased, alkaline storage battery.

Nickel cadmium batteries have long been used in vital power services in Europe, but Nicad is the first nickel cadmium battery to be made in America. It has characteristics of long life and freedom from need of care — both desirable in the emergency lighting field.

Mounted on top of the unit are two 6-volt lamp heads and reflectors. Front panel mounting includes a high-rate charge timer that can be set from 0 to 12 hours, an amber neon "readiness" light, a red neon "high rate" light, a 6-volt light switch and a push button test switch. A removable sub-assembly carries the transformer, rectifier, cut-over relay, timer, trickle-charge resistor and all other components.

The circuit is designed to maintain the "Nicad" battery on trickle-charge and to permit recharging the battery within 12 hours. The duration of the high rate charge is set by the timer. The red neon pilot light, indicating that the high rate is on, goes out when the charge is completed. The amber neon pilot light indicates that the a-c is on and the unit is in standby condition, ready to operate. If the 6-volt light switch is open, the amber light will be out, thereby indicating the unit is not in "readiness" condition. The push button test switch makes it possible to check operation of relay, battery and lights.



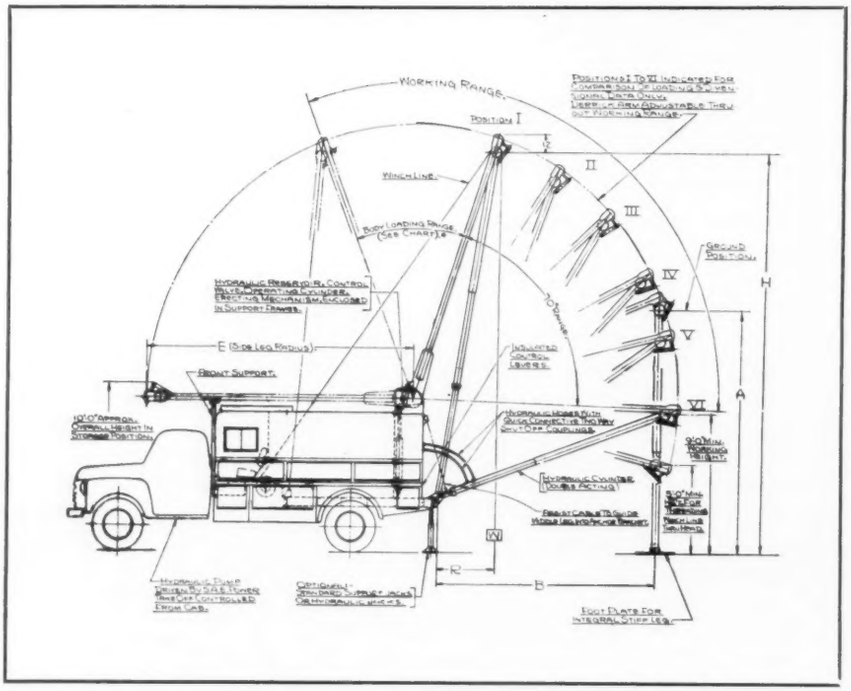
The "Nicad" Emergency Lighting Unit provides an auxiliary 6-volt light source which comes on automatically when normal a-c supply fails.

"Live Boom, Heavy Duty Derrick"

THE HOLAN CORP., 4100 West 150th St., Cleveland, Ohio, has completed a new *"Live Boom, Heavy Duty Derrick" of* 12,000 pound capacity — designed to meet the Utility industry's demands for a versatile piece of equipment that can erect 70-foot poles with ease, remove poles from the toughest ground, and load heavy equipment onto the body space.

The new Holan Series 3700 Model "HL" Derrick, made in three sizes, adds tons of capacity to exceed all heavy duty derricks of the past. A difference of 1,000 pounds integral stiff leg and maximum capacity distinguishes the "HL" 22, the "HL" 24 and the "HL" 26 "Series 3700 Derrick." Maximum capacity reaches 12,000, 11,000 and 10,000 pounds respectively, and integral stiff leg capacity reaches 16,000, 15,000 and 14,000 pounds respectively.

The power for operating the Holan Series 3700 Model "HL" Derrick is



New "Live Boom Heavy Duty Derrick" is designed to meet utility industry's demands for equipment that can erect 70 foot poles with ease.

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Splints and Ties

Protect and reinforce telephone line wire at supports • Minimize wear, chafing • Absorb vibration • Reduce possibility of slippage • Practically eliminate maintenance • EASY TO INSTALL—only tool required is a pair of pliers for "pigtailing" tie ends • Available in Galvanized Steel or Copperweld.

Guy-Grips

PREFORMED "GUY-GRIPS" assure the fastest, most economical and most efficient means of dead-ending guys • Eliminate the need for clamps • Save about half the steel strand usually required • CAN BE INSTALLED BY HAND • Will not slip • No retightening is ever necessary • Are stronger than strand itself.

For complete details, write or telephone Cleveland, EXpress 1-3571

PREFORMED LINE PRODUCTS CO.

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provided by a hydraulic pump driven by a power take-off mounted on the truck transmission. Control knob on dash engages power take-off to drive pump. Automatic throttle control provides unattended proper pump operation under load. Complete derrick operation — erection, stowing, lifting, pulling, and loading or unloading — is controlled by one man standing at left rear side of body where the super-sensitive control levers are located. This improved construction design affords operator maximum visibility and safety. As added safety features, these control levers are insulated and extend away from the body. They are not confined by hazardous compartments or doors.

The Holan Series 3700 Model "HL" Derrick operating mechanism is completely enclosed and concentrated into a minimum of space. The danger of overloading this derrick is completely eliminated by the utilization of pressure relief valves which are automatically activated when load exceeds capacity. The entirely new mechanism with rigid link type connections affords positive control in erection or stowing. Erection can be accomplished in approximately 30 seconds and stowing in 40.

The wide 195° working range of the new Holan 3700 Derrick permits the boom to be lowered to a 5-foot height. A man standing on the ground can easily thread winch cable through derrick head. Center leg (double acting hydraulic cylinder) is detached from body and swung to ground for stiff leg position. Tremendous pulling power can be applied in removing poles by the stiff leg's fulcrum action.

In loading heavy equipment onto the body floor space, the center leg is placed in forward derrick position. Equipment up to 5,000 pounds can be lifted off the ground and carried 4 to 7½ feet inside the body completely controlled at all times.

In stowing, the center leg is swung against one of the rigid type side legs (no pins) and is held by a fast acting clamp. This new method of stowing center leg affords speed and leaves valuable body space free for loading.

New Service-Kit Soldering Iron Can Be Carried While Hot

New soldering iron comes with an asbestos and metal lined container and can be carried in a tool kit while hot.

A NEW SOLDERING iron that heats in 60 seconds and is designed to be carried in a tool kit, while hot, has been announced by Drake Electric Works, Inc., Chicago, Ill.

Known as the Drake 403 Soldering Iron, this iron comes complete with an asbestos and metal-lined container, and can be carried in a tool kit while hot. The fast-heating feature is of value to servicemen.

Rated at 80 watts, with a 7/32-inch tip, the Drake 403 weighs only 8 ounces. It includes many desired features, such as radiating fins that keep the handle cool at all times.

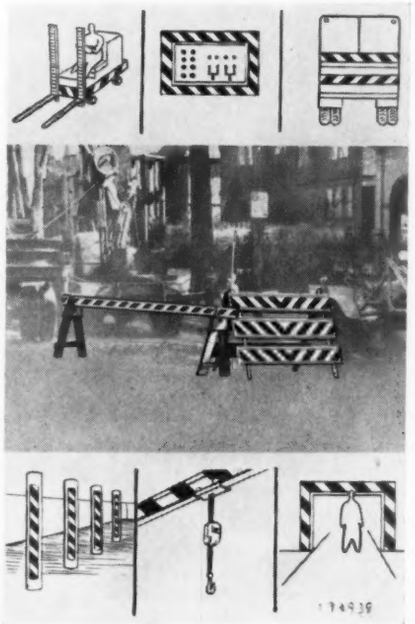
Self Sticking Warning Stripes Replace Costly Hand Painting

BRILLIANT, diagonally-striped warning signals in quick-to-apply, self-sticking tape form are new products of W. H. Brady Co., Milwaukee 12, Wis. Trade named "Brady Warning Stripes," they can be applied to dangerous equipment and in hazardous areas in place of slow, costly hand-painting and stencilling.

Brady Self-Sticking Warning Stripes are applied permanently to any clean, dry surface without moistening. The user can mark barricades, low or narrow areaways, elevator gates, pillars, electrical apparatus and trucks in seconds.

The Stripes are stocked on handy rolls, 1″, 1½″, 2″ and 3″ wide. The user can choose from three bright color combinations: Yellow and Black Stripes; Black and White Stripes; and Red and White Stripes.

All colors and sizes of Warning Stripes are stocked in three different self-sticking materials. Acetate plastic is recommended for indoor applications, durable polyvinyl plastic for outdoor applications and in areas where dirt, grease, oil and solvents are prevalent, and "SCOTCHLITE" reflective material for use wherever warning signals with brilliant reflection are necessary.



Self-Sticking Warning Stripes are applied permanently to any clean, dry surface without moistening.

PLANT NOTES

By RICHARD ALLEN

"Over the years, technical advances have made it possible to build more efficient facilities."

***TROUBLE-FREE PLANT*: —** Keeping telephone facilities in good working order is a basic requirement for providing good service. Nowadays, it is becoming more important than ever as the scope of long distance dialing widens throughout the country.

The Ohio Bell Telephone Co. takes many steps to make plant as trouble-free as possible, and working on all fronts, it is continually searching for ways to do the job better. One example is trouble reporting. For some months a trial has been under way whereby operators at many cities having circuits into a No. 4 system make a record of troubles encountered on first attempts — instead of only reporting troubles on second attempts. The tickets for "first attempt failures" are examined by a local area committee to determine necessary corrective action, and the results are then sent to other committees for further analysis. This practice has helped speed up locating and clearing troubles.

As an outgrowth and possible replacement of this trial, a method designed for still faster trouble-clearing is being tried out at Washington and will soon be extended to Newark and Cleveland. Under this method, operators report first attempt failures verbally to the testroom, and if it appears that there are equipment or circuit troubles along the route, the testboard forces take over the circuit. From these trials, it is hoped to develop a permanent procedure for more effective reporting and handling of troubles on dial trunks and circuits.

***NEW CONDUIT*: —** Soapstone is a soft, soapy-feeling kind of rock that looks about as unlikely a candidate for telephone plant material as you'd ever expect.

But mix soapstone with cement and other ingredients, put it through the proper manufacturing processes, and you have a new kind of underground conduit that has subway inspectors impressed. According to *Pacific Telephone Magazine*, the cost is low, it is easier to handle, is faster and less expensive to lay, and with a concrete encasement it offers maximum protection to underground cables.

The soapstone conduit comes in single ducts, flat-sided and octagonal in shape. You can build up a conduit structure of any number of ducts by combining the singles. After the conduit has been laid in a trench and coupled with the cardboard joints on each four-foot unit, an enveloping concrete mix is poured over the combined ducts. Build manholes, and you're ready to pull in the cable.

Here's an example of how soapstone conduit speeds underground cable construction and cuts contracting costs for Pacific Telephone. Laying a four-way soapstone conduit for the new Oakland-Los Angeles coaxial cable between San Jose and Gilroy, a three-man contractor's crew hit a pace of 1,500 completed feet in one day.

***SAFEGUARDING PLANT*: —** Over the years the telephone industry has succeeded in minimizing damage from nature's blows by improved techniques in engineering, construction and maintenance methods. Today, however, telephone plant faces another kind of hazard — accidental, man-made damage. Accidental damage stems from as simple a project as a farmer digging a hole for a fence post or a contractor clearing away tree stumps with a bulldozer. It also results from a larger undertaking like blasting for the construction of a new highway.

Recent plant extension programs have brought into service thousands of miles of new telephone routes that carry message circuits vitally important to the national security and public welfare. At the same time, construction on new housing, highways, public works, industrial plants and home repair has continued in high gear across the nation. These two factors have greatly increased the situations endangering telephone plant.

The importance of the job of safeguarding plant and the steps that are being taken to prevent damage are outlined in a new booklet called "Plant Protection and Public Relations" which was recently completed by the Long Lines Dept of A.T.&T. Co. The booklet is now being distributed to all Plant and Engineering employes and to management people.

Long Lines Plant people are continually devising means for safeguarding service from accidental damage. They are johnny-on-the-spot when the public begins new construction; they get to know property owners and tenants along the rights of way; they talk with contractors and utility and municipal people; they urge those involved in construction to check with telephone people; they mark routes, and distribute booklets and calendars containing the number of the telephone office to be called in case of construction near the lines. Yet, there is a need for still more vigilance.

TELEPHONE ENGINEER & MANAGEMENT'S

HANDBOOK DATA SHEETS

Prepared By
JOHN S. REED

Data on Prestressing and Tensioning or Sagging Self-Suporting Cable

After determining the proper span lengths, the cable is pulled up to the correct prestessing sag or tension obtained from Tables VI to IX.

Index 4-15.02
Aerial Cable Self Supporting
Page 5, June 15, 1954.

Table VI
Prestressing Sag and Tension Data
Self-Supporting Ankoseal Telephone Cable
6-Pair No. 19 AWG — Type 775-P-SS
(Based on Ansonia Data Sheet No. SS-606)

	Heavy Loading District		Medium Loading District		Light Loading District	
Span Length in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet
50	465	0.08	358	0.11	285	0.14
75	500	0.18	415	0.21	314	0.28
100	500	0.31	460	0.34	343	0.46
125	500	0.49	500	0.49	370	0.66
150	500	0.71	500	0.71	385	0.92
175			500	0.96	413	1.16
200			500	1.25	430	1.45
225			500	1.69	447	1.89
250			500	1.96	458	2.14

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Table VII
Prestressing Sag and Tension Data
Self-Supporting Ankoseal Telephone Cable
11-pair No. 19 AWG — Type 775-P-SS
(Based on Ansonia Data Sheet No. SS-1106)

	Heavy Loading District		Medium Loading District		Light Loading District	
Span Length In Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet
100	900	0.24	690	0.31	544	0.39
125	915	0.36	740	0.45	580	0.57
150	915	0.52	790	0.60	608	0.78
175	915	0.71	835	0.78	637	1.02
200	915	0.93	880	0.96	657	1.29
225	915	1.17	915	1.17	680	1.58
250	915	1.46	915	1.46	703	1.90
275	915	1.76	915	1.76	718	2.24
300	915	2.09	915	2.09	735	2.60
325			915	2.45	750	3.00
350					765	3.44

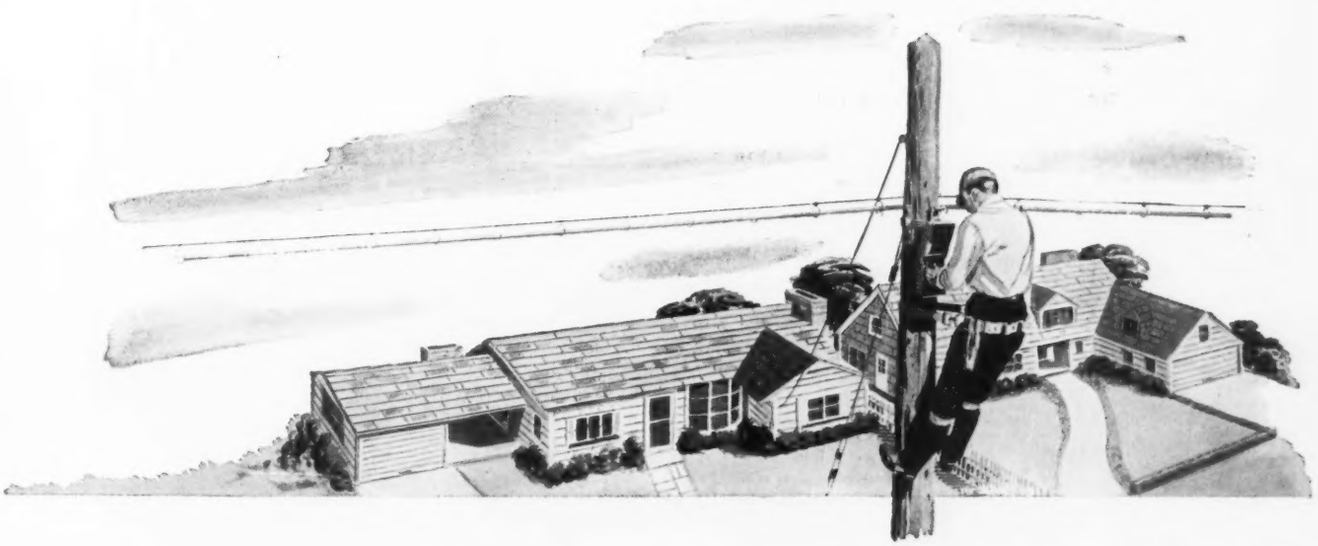
Table VIII
Prestressing Sag and Tension Data
Self-Supporting Ankoseal Telephone Cable
16-pair No. 19 AWG — Type 775-P-SS
(Based on Ansonia Data Sheet No. SS-1606)

	Heavy Loading District		Medium Loading District		Light Loading District	
Span Length in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet
100	1160	0.25	920	0.32	750	0.39
125	1270	0.36	970	0.47	790	0.58
150	1330	0.50	1032	0.64	830	0.79
175	1330	0.68	1080	0.83	857	1.05
200	1330	0.88	1130	1.09	885	1.33
225	1330	1.12	1175	1.27	913	1.63
250	1330	1.38	1217	1.51	938	1.96
275	1330	1.67	1250	1.78	962	2.32
300	1330	1.99	1285	2.06	983	2.70
325	1330	2.34	1320	2.35	995	3.13
350	1330	2.71	1330	2.71	1015	3.54
375	1330	3.04	1330	3.04	1030	3.92
400			1330	3.54	1043	4.51
425			1330	3.99	1060	5.01
450			1330	4.47	1066	5.58
475			1330	4.98	1078	6.15

Table IX
Prestressing Sag and Tension Data
Self-Supporting Ankoseal Telephone Cable
26-pair No. 19 AWG — Type 775-P-SS
(Based on Ansonia Data Sheet No. SS-2605)

	Heavy Loading District		Medium Loading District		Light Loading District	
Span Length in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet	Tension in Pounds	Sag in Feet
100	1655	0.25	1350	0.31	1148	0.37
125	1765	0.37	1410	0.47	1172	0.56
150	1865	0.51	1470	0.64	1217	0.78
175	1965	0.66	1515	0.85	1248	1.04
200	2060	0.82	1565	1.08	1270	1.33
225	2140	1.00	1615	1.33	1298	1.65
250	2160	1.23	1660	1.59	1320	2.00
275	2160	1.49	1710	1.87	1345	2.38
300	2160	1.77	1735	2.20	1365	2.80
325	2160	2.08	1770	2.53	1385	3.23
350	2160	2.41	1805	2.88	1402	3.71
375	2160	2.76	1840	3.24	1425	4.18
400			1870	3.63	1440	4.70
425			1890	4.05	1452	5.27
450			1915	4.48	1470	5.83
475			1940	4.93	1475	6.48

THE GREATEST NAME IN ELECTRICAL WIRE AND CABLE



TELEPHONE DROP WIRE...

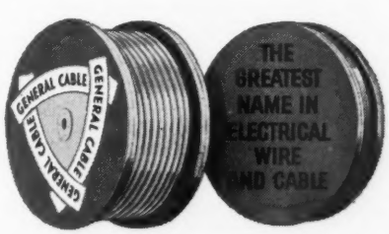
General Cable—the nation's only supplier of a complete line of telephone wire and cable of *all* types—combines broad manufacturing facilities with more than half a century of practical experience. This combination produces unusual dependability and longer service life in Telephone Drop Wire.

Designed to resist excessive weathering, exposure to sunlight, abrasion and corrosive chemical vapors, they are available with two conductor (twisted pair or parallel) and with multiple conductor constructions ... with copperweld, bronze or copper conductors.

Here are a few of the more popular types:

Figure 8 Mid Rip All Neoprene
NEOTEL (Rubber-neoprene) parallel and twisted pair
(Reinforced and Nonreinforced)
GENCASEAL (Plastic) Six Pair Multi-Drop

Of course, special constructions are available to meet your requirements. You name it ... we'll design and make it.



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TELEPHONE ENGINEER & MANAGEMENT'S

HANDBOOK DATA SHEETS

Prepared By

JOHN S. REED

Data on Prestressing and Tensioning or Sagging Self Supporting Cable — (Continued)

In the prestressing operation, grips must be used with due care to avoid damage to the cable. The prestressing, which need be held no longer than it takes to carry out the operation, eliminates the non-elastic stretch in the cable conductors and assures a more uniform distribution of stress under operating conditions. The prestressing is accomplished by bringing the cable up to the prescribed sag or tension value and then slacking off to the final sag or tension figure given in Tables X, for 6-pair cable; XI, for 11-pair cable; XII, for 16-pair cable; and XIII, for 26-pair cable.

Table X
Sag and Tension Installation Data-No Ice or Wind Load
Self-Supporting Ankoseal Telephone Cable
6-pair No. 19 AWG — Type 775-P-SS
(Based on Ansonia Data Sheets Nos. SS-603, SS-604, SS-605)

Span Length in Feet	Sag in Feet for Temperature in Degrees F				Tension in Pounds for Temperature in Degrees F			
	0	30	60	90	0	30	60	90
				Heavy Loading District				
50	0.14	0.18	0.24	0.34	272	217	163	116
75	0.52	0.68	0.88	1.08	170	130	100	81
100	1.87	2.10	2.33	2.53	84	75	68	62
125	3.82	4.02	4.23	4.43	64	61	58	56
150	6.11	6.31	6.48	6.68	58	57	55	54
				Medium Loading District				
50	0.14	0.18	0.24	0.34	272	217	163	116
75	0.34	0.42	0.54	0.71	260	208	163	123
100	0.62	0.77	0.96	1.20	248	203	163	130
125	1.02	1.24	1.51	1.80	238	196	163	136
150	2.13	2.46	2.80	3.13	165	143	126	112
175	3.67	4.01	4.37	4.69	131	120	111	108
200	5.52	5.87	6.21	6.57	114	107	102	96
225	7.57	7.89	8.23	8.55	105	101	97	94
250	9.98	10.3	10.6	10.9	100	97	94	91
				Light Loading District				
50	0.14	0.18	0.24	0.34	272	217	163	116
75	0.34	0.42	0.54	0.71	260	208	163	123
100	0.62	0.77	0.96	1.20	248	203	163	130
125	1.02	1.24	1.51	1.80	238	196	163	136
150	1.57	1.84	2.17	2.50	225	192	163	141
175	2.23	2.59	2.95	3.33	215	186	163	144
200	3.09	3.45	3.86	4.26	204	182	163	146
225	4.00	4.43	4.88	5.32	198	179	163	149
250	5.09	5.58	6.04	6.51	193	176	163	151

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Know Your Commissioners—

Meet

Hon. John H. McCarthy

This is the fifth of a series of articles introducing members of state and national regulatory commissions and officers, directors and chairmen and committee members of the National Association of Railroad & Utilities Commissioners.

QUESTION: When is an engineer a lawyer? Answer: When he is serving as Trial Judge Advocate of General Courts Martial of the United States Army.

At least, we suppose that's the answer. But if you want it straight from headquarters you'll have to ask the Hon. John H. McCarthy, Chairman of the Michigan Public Service Commission. But more about that later.

A native of Michigan, "Jack" McCarthy received his early education in local schools, later attending St. Louis University and the University of Michigan. From the latter he graduated as a Civil Engineer.

In his profession as engineer, he was for some years a construction engineer, associated with the Michigan State Highway Department. He later became a member of that organization, as Metropolitan Engineer.

It was from this position that he entered, in 1942, the military service in a Combat Engineer Unit. He saw service in both the Pacific and European Theatres. He left the service, in 1946, as a Major, after serving as the battalion executive officer, administration officer of a Mine Training School and, as has been mentioned, Trial Judge Advocate.

Precisely how this TJA business came about, perhaps no one will ever know — considering the way things are done in the military. But apparently someone higher up got the impression that McCarthy was a lawyer, or maybe looked like a lawyer. The upshot was that McCarthy was promptly appointed a Trial Judge Advocate.

Anyway, Judge McCarthy prosecuted some 18 cases during the seven months it took him to prove that he was not a lawyer — and they do say that he did a grand job with every case.

HON. JOHN H. McCARTHY, Chairman of the Michigan Public Service Commission.

Following his return to civilian life, Mr. McCarthy carried on his own engineering business until July of 1949, when Governor Williams appointed him Chairman of the Michigan Commission.

During his several years as a Michigan commissioner, Mr. McCarthy has become prominent in the affairs of the National Association of Railroad and Utilities Commissioners. He is now a member of the Executive Committee of that organization, and of its committee on Legislation and Atomic Energy. He also served as a cooperator with the Federal Communications Commission in the Jordaphone case.

Making their home in Lansing, the

Please Turn To Page 76

How to write a clear, logical technical paper

Step by step this authoritative book tells you how to select the type of report you should use, how to choose the most suitable forms and style, how to organize the material, and how to use figures, tables, and annotations—in short, make the report that is clear and understandable and wins acceptance for its ideas.

WRITING THE TECHNICAL REPORT

Telephone Engineer Publishing Corp.

By J. RALEIGH NELSON

University of Michigan
College of Engineering,
Professor Emeritus of English,
of those who will read and use it.
Third Edition, 356 pages, 5½ x 8½, 238 illustrations, $4.50

This practical guidebook takes up scores of specific points in the design and composition of the report and gives you exact directions for the setup of both long- and short-form reports, with numerous examples to guide you. In addition, the book outlines a system for the critical examination of the report to help you make sure it will meet the requirements

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Written in a light style, this is just the book for those who never got beyond arithmetic and now wish an introduction to more advanced mathematics in convenient self-study form; and for those whose acquaintance with algebra or trigonometry is slight and who wish to review and then proceed to calculus and number theory.

LIVING MATHEMATICS

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Professors of Mathematics,
Texas Technological College

2nd Edition, 336 pages, 6 x 9, $5.50

This popular book provides not only a thorough course in algebra, but also a survey of the mathematical highlights of trigonometry, analytic geometry and more advanced algebra and calculus — all written in a practical, interesting, and oftentimes humorous manner. Included are discussions of variables and extended analytic geometry.

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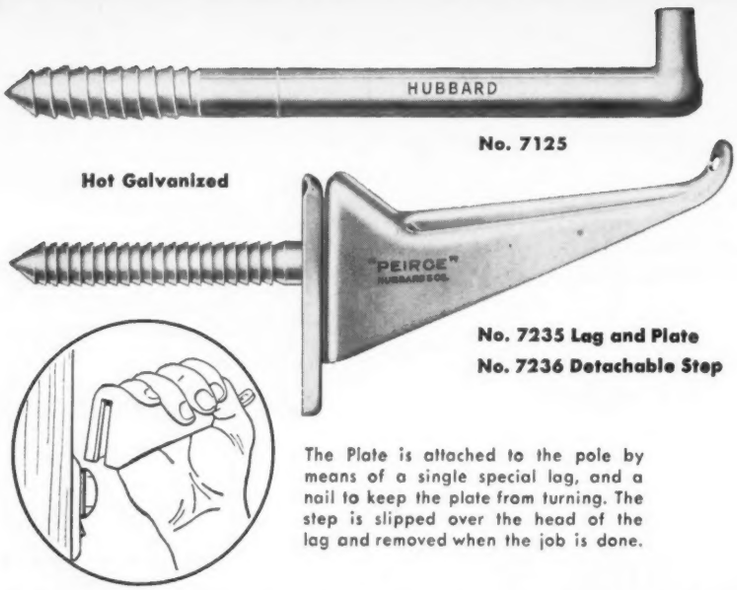
HUBBARD POLE STEPS



No. 7125

Hot Galvanized

No. 7235 Lag and Plate

No. 7236 Detachable Step

The Plate is attached to the pole by means of a single special lag, and a nail to keep the plate from turning. The step is slipped over the head of the lag and removed when the job is done.

Four or five Hubbard Detachable Pole Steps at the bottom of the pole discourage unlicensed climbing. For the upper pole, Hubbard Pole Step No. 7125 has gained well deserved popularity. Made of new Open Hearth Steel, it is regularly tested for strength far in excess of any possible human load. It has fetter drive threads and a drive head for easy driving without bending or injury. The Pole Step provides ample foot room, and a marking ring indicates correct driven depth and forms a tight seal against water seepage. Both Steps are universally used by the largest telephone companies.

"Hang the Load on Hubbard Hardware!"

OVERHEAD

Cable Suspension Material—Wireholders Pole Seats and Balconies—Clevises Braces—Drive Hooks—Messenger Dead Ends—Extension Arms—Long Span Material—Pins—Clamps—Guards—Stubbing Bands—Guy Protectors—Guy Clamps Pole Struts—Clips—Straps—Hangers Carriage Bolts—Rings—Transposition Brackets—Eye Bolts—Pole, Corner and House Brackets—Guy Hooks—Strain Plates—Storm Guy Straps—Lags—Machine and Hubeye Bolts—Sidewalk Guys REA Telephone Hardware

UNDERGROUND

Cable Racks—Manhole Ladders and Steps Pulling-in Irons—Expanding Anchors Cable Shields—Screw Steelwing Anchors Anchor Rods—Ground Rods and Clamps

HUBBARD AND COMPANY

PITTSBURGH • CHICAGO • OAKLAND, CALIFORNIA

capital city of Michigan, Mr. and Mrs. McCarthy have three sons.

The oldest son, graduating this year from Marquette University as a Civil Engineer, will serve in the Marine Corps. The second son, who has seen Korean service in the Navy, is now an electrical engineering student at Michigan State College. The youngest son is in high school.

In addition to his duties as Commissioner, Jack McCarthy works for free at civic undertakings, and particularly at Civil Defense. For recreation he shoots a bit of golf when he gets the chance — and swims.

We think that maybe this swimming business is as good a key to the character of this man McCarthy as it is possible for us to present to you.

He swims in March and through November, we are told, in the open waters of his home state.

And when anybody swims for the fun of it, in the wide-open spaces of the great soverign state of Michigan, in March and in November — brother, he's got what it takes!—THE END.

Nelsen Completes 1st Year In REA Assignment

A FULL YEAR of Rural Electrification Administration activity under Administrator Ancher Nelsen was completed in April, when $5,900,000 in farm telephone loans was made, REA reported last month. The telephone loan total is more than double the figure for April, 1953.

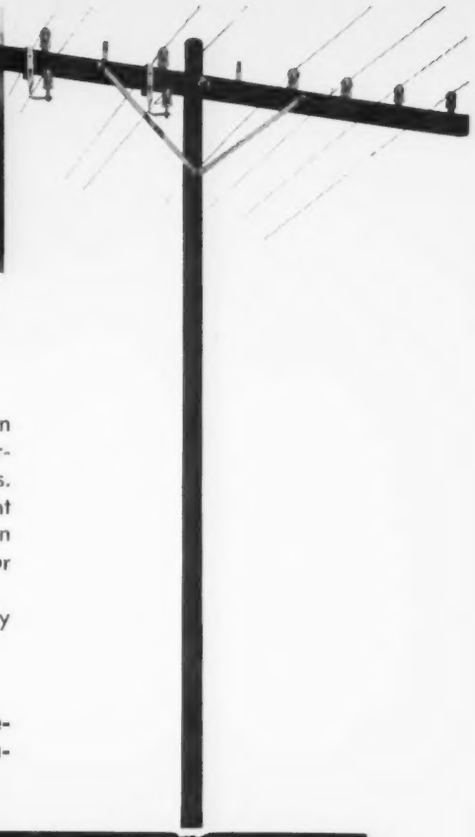
During Mr. Nelsen's first year, 54 telephone borrowers cut over 161 exchanges to operation. In the corresponding period a year previously, 26 borrowers cut over 76 exchanges.

In the 12-month period, telephone loans totaled $56,800,000, compared with $56,600,000 in the preceding full year. Telephone loans were approved in 32 states.

New Dial System Serves Harrison City, Pa.

HAROLD G. PAYNE, president of the Murrysville Telephone Co., Export Pa., has announced that the Harrison City, Pa., exchange has been converted to dial operation.

Prior to conversion, the area was served by the company's Export exchange. Conversion to dial made it possible to create a new exchange and base rate area providing graded service to the customers in these towns.



STRENGTH AT LOW COST with Taylor-Colquitt *SUPERIOR* Poles

Preservation through many years of the natural strength of choice Southern Pine makes practical the use of smaller poles for heavy loads when Taylor-Colquitt produces them. And smaller poles naturally cost less than larger ones. Installations now standing in most States east of the Mississippi give abundant evidence that Taylor-Colquitt insistence over the years on rigid forest selection and meticulous care in manufacture and treatment invariably results in superior poles . . . poles that carry heavier loads longer.
Detailed design figures on unit strengths of Taylor-Colquitt poles will be gladly furnished.

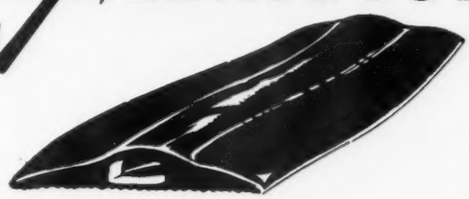
Taylor-Colquitt poles are distributed to independent telephone companies exclusively by Automatic Sales Corporation, 1033 West Van Buren Street, Chicago 7, Illinois.

TAYLOR - COLQUITT CO.
SPARTANBURG, SOUTH CAROLINA

PLANTS AT SPARTANBURG, SOUTH CAROLINA AND WILMINGTON, NORTH CAROLINA

Do you know these facts about

FLEXIDUCT?



It's the new rubber floor duct that solves over-floor wiring problems quickly and effectively, with adequate protection from sweepers, mops and equipment on casters. Installation is easy and permanent. You just fasten Flexiduct in place with its own special cement. There's no drilling or necessity to use screws and fasteners. Flexiducts' flexibility allows it to adhere evenly and securely to all types of floor surfaces and it is adaptable for installations ranging from 2 conductors to 25 pair switchboard cables. Write for complete information regarding Flexiduct and your wiring problem today.

Export Agents | Ericsson Telephone Sales Corp.
100 Park Ave. New York 17, N.Y.

For further information, write for circular 753 A.

BUCKEYE TELEPHONE & SUPPLY COMPANY
1250 KINNEAR ROAD Kingswood 0655 COLUMBUS OHIO

DANISH SWITCH-BOARD PLUGS

The plastic insulation injected between the conductors stays solid. It covers the edge of the brass shell, positively preventing cause of most shorts. Invented and used exclusively by TELEFON FABRIK AUTOMATIC A/S since 1912. These plugs provide unsurpassed precision in machining, solidity of construction, and high insulation safety.

Available as replacements for all popular two-and three conductor plugs.

The most popular types are stocked by our sales distributors in U. S.

BUCKEYE
Telephone & Supply Co.
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SUTTLE
Equipment Co.
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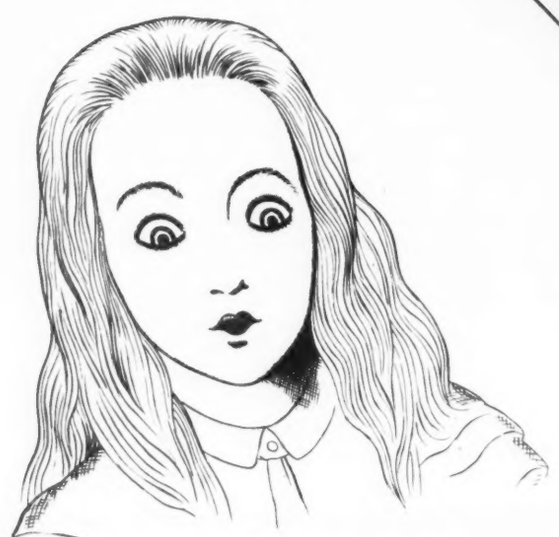
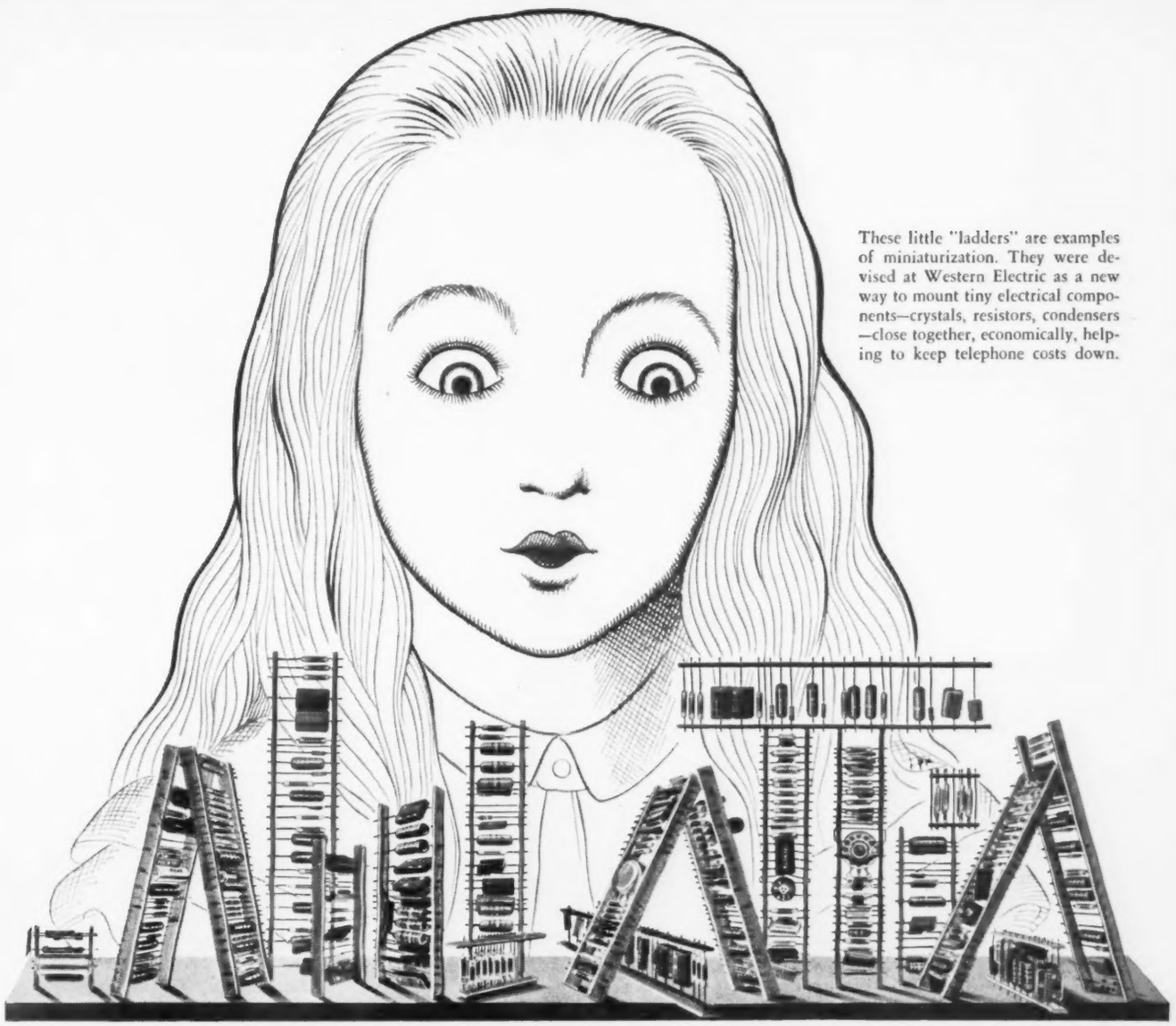
Write for the catalog.

TELEFON FABRIK AUTOMATIC A/S
COPENHAGEN DENMARK



Looking Glass...

The advertising pages of national magazines mirror American industry. With advertisements like the one reproduced across the way we regularly try to reflect our part in the telephone industry . . . and our contribution to public satisfaction through the work we do in the Bell System.



These little "ladders" are examples of miniaturization. They were devised at Western Electric as a new way to mount tiny electrical components—crystals, resistors, condensers—close together, economically, helping to keep telephone costs down.

Alice in Mini-Land

Your eyes—like Alice's—would widen to behold the improbable tininess of many things now going to work for you in telephone equipment. Making small things smaller goes on in a big way here at Western Electric where Bell telephone equipment is made.

And, it's big news for telephone users in two ways. For example, "miniaturization", as it's called, often lets designers plan telephone equipment so it costs less, works better, or both. Then, too, space saved on a small unit, repeated many, many times, grows and grows in importance—until eventually thousands of dollars may be saved in costly building construction alone. All this means lower cost in running the telephone business.

So, Alice actually is looking at proof of the value of Western Electric's teamwork with its partners—Bell Laboratories and the Bell telephone operating companies. This teamwork is a big reason why your Bell telephone service has gone up in price so much less than most other things you buy.

Western Electric

A UNIT OF THE BELL SYSTEM SINCE 1882

OUR BUSINESS means pleasure . . . with low-cost long distance. North, south, east and west—long distance makes the whole country a neighborhood.

"We're Selling Long Distance Now"

STUDIES SHOW that many people overestimate the cost of long distance calls and they tend to think of them only in connection with emergencies and important family news. These ideas, coupled with hold-overs from the war years when customers were encouraged to use long distance as little as possible, are being countered by a full-scale sales plan now under way to stimulate the use of long distance.

Up until now, little could be done in the post-war years to promote long distance calls. Shortages after the war limited the necessary toll facilities. Long distance lines were crowded and the stimulation of new business would have resulted in a service not up to our standards. As supplies and materials became available, new toll facilities were added in record time. New developments, too — such as coaxial cable, microwave systems, operator toll dialing and improved carrier systems—helped ease the pressure on heavily loaded equipment.

Today, with no restrictions on the use of long distance and *with the equipment in service to do the job,* the telephone industry is able to handle many more calls. And, since revenue from long distance calls is a vital part of the telephone economy, encouraging the public to use long distance service makes good sense among all telephone employes.

Toll Sales Groups

TO REACH THE business customers, toll sales groups have been formed and trained salesmen are calling on selected business customers. In these interviews, salesmen help determine the needs of the customer and suggest usages of toll particularly adapted to him. This service will be of benefit to the customer, because of a more efficient and effective use of toll and, to the industry, through additional revenue from increased toll usage. This procedure has been tested in several cities and has proved effective.

Encouraging the residential subscriber to use long distance will be aided through magazine and newspaper advertising, radio and television spots, bill inserts and various other means. Based on actual studies of the habits of long distance users, the campaigns will stress the low costs, convenience and speed of long

Construction and

WITH THE DOUBLE

STROMBERG-CARLSON

LEADING

individual station protector

reliable 955

MFD. BY RELIABLE ELECTRIC COMPANY

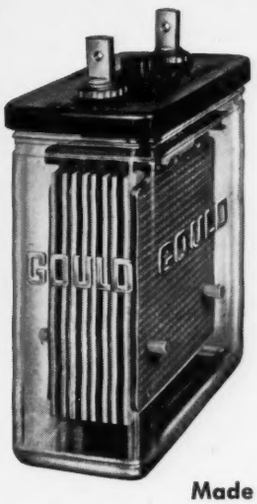
- One-piece Design
- Simplified Mounting
- Asbestos Mats Eliminated

The very simplicity of the Reliable 955 is assurance of long, trouble-free service. Fuses are mounted on a one-piece, low absorption porcelain, well spaced for convenient connecting. Reliable Self-cleaning Sawtooth Discharge Blocks are standard, dissipating static without time lag or danger of grounding the line. The 955 uses No. 55L, seven ampere ceramic fuses.

"Reliable Identifies the Quality"

tion materials
nd Supplies
OUBLE GUARANTEE OF
ARLSON AND AMERICA'S
EADING MANUFACTURERS

the battery that lasts practically forever



gould planté

For long life and uniform dependable service, no other telephone battery equals the Gould Planté. It has rolled up amazing performance records, remaining in active full-float service for 20 years, 30 years and longer!

In the Planté, *all* of each positive plate is pure lead, containing *no* antimonial impurities. Thus, Gould has eliminated the primary cause of self-discharge, capacity losses and shortened battery life. Planté batteries float at constant voltage and maintain rated capacity all their life. Because they almost never need service, maintenance is negligible. If you would cut battery costs to a minimum, choose Planté.

Made by GOULD-NATIONAL BATTERIES, INC.

·ANSONIA·

Ankoseal®

THE MODERN, PLASTIC-INSULATED TELEPHONE CABLE

has these advantages:

LIGHTWEIGHT
WEATHERPROOF
WATERPROOF
CHEMICAL RESISTANT
ELECTRICALLY SUPERIOR

Available for aerial, duct and direct burial — paired, quadded and composite constructions. Use Ankoseal on your next job. Get full details from your nearest Stromberg-Carlson Branch Office.

THE ANSONIA WIRE & CABLE COMPANY

Use ALL the anchorage area with CHANCE 8-Way Expanding Anchors

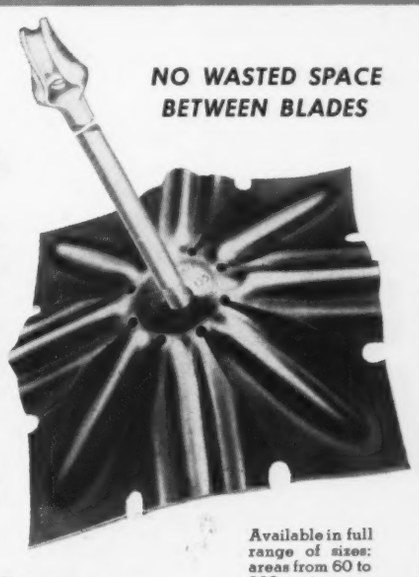
The Chance 8-Way has eight blades, instead of the usual 2 or 4, that expand to form a square convex-shaped anchor with up to 63% of its area in undisturbed earth. This convex shape holds like a wedge.

The load is evenly distributed over all 8 blades all the way around the anchor with each blade carrying only one-eighth of the total load and the base plate supporting each blade. Heavy ribs also reinforce the blades.

The Chance 8-Way expands quickly, too; requiring 3 to 9 fewer blows than other expanding anchors under comparable conditions.

You buy with confidence when you buy a CHANCE.

NO WASTED SPACE BETWEEN BLADES



Available in full range of sizes: areas from 60 to 200 sq. in.

Made by A. B. Chance Company

Distributed by

STROMBERG-CARLSON

ROCHESTER • CHICAGO • ATLANTA • KANSAS CITY • SAN FRANCISCO • TORONTO

High Fidelity Radios and Radio-Phonographs

Office Intercom Equipment

Electronic Carillons for Churches and Public Buildings

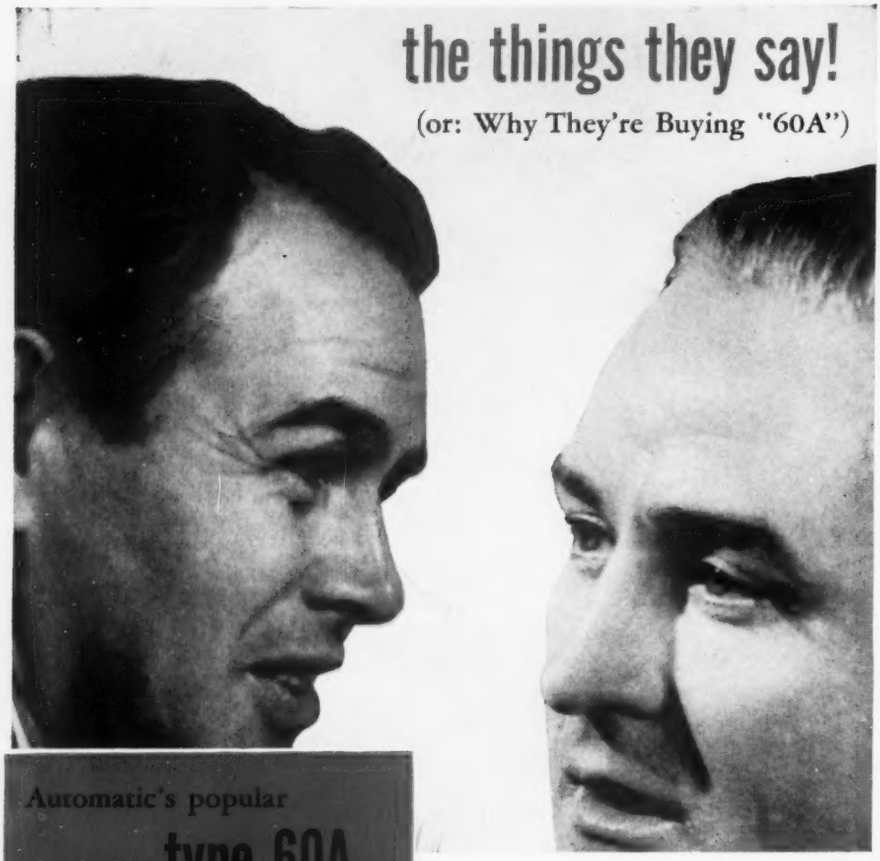
Sound and Public Address Systems

"Panoramic Vision" Television Receivers

AND MANY OTHER ELECTRONIC PRODUCTS FOR OUR ARMED FORCES

the things they say!

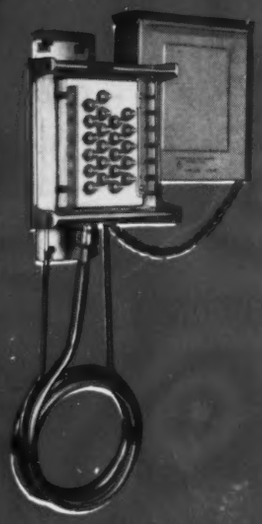
(or: Why They're Buying "60A")



Automatic's popular

type 60A

unprotected cable terminal



Stock up on these handy sizes today:

Cat. No.	Capacity	Shipping Wt.
SA-51	11-pair	14 lbs.
SA-53	16-pair	17 lbs.
SA-55	26-pair	21 lbs.

(all have 6-ft., 24-ga. stub)

"You Always Get It In Good Shape". Stub guard takes the strain of carrying, keeps stub safe. Quickly removed after installation.

"It's So Easy to Install." All you do is fasten the detachable bracket to the pole with a lag screw, hang the terminal on the bracket, and tighten four bolts. Reversible — install above or below cable.

"Never a Bit of Trouble." Lead nipple gives strong, moisture-proof joint for cable. Rubber shutters keep wires from scraping housing. Openings shielded against moisture, dust, and insects.

"Outlasts the Cable." Even years of dampness mean nothing to "60A". Terminals are sealed in porcelain and protected by weather-proof zinc cover.

Product of the Telephone Specialty Department of

AUTOMATIC ELECTRIC

Distributors in U. S. and Possessions: Automatic Electric Sales Corporation
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U. S. A.

distance calls — facts misunderstood by many subscribers.

Telephone employes can play an effective part in this campaign. They can help promote the use of long distance by telling their friends:

(1) Long distance *rates are low*—station-to-station and night and Sunday rates are even better bargains.

(2) Long distance *calls are fast*—circuits are now available to speed your calls.

(3) Long distance is *easy to use*—a call saves time and trouble.

Ask your friends to guess how much it costs to call long distance—say, from Washington to San Francisco, Richmond to Cleveland, Baltimore to Omaha, Charleston to Denver.

Chances are they'll guess high and will be surprised when you tell them the Washington to San Francisco call costs only $2, Richmond to Cleveland is only 80 cents, the rate from Baltimore to Omaha is $1.35, and the Charleston to Denver is but $1.50. (These are the three-minute, station-to-station rates, nights and Sundays, and do not include the federal excise tax).

It's a common error that most people make, for the cost of long distance calls is surprisingly low.

New developments in long distance communications such as microwave systems, coaxial cable routes, operator toll dialing and improved procedures have made the service faster and more convenient than ever before.

Now that facilities are available for thousands more calls, it's up to industry members to acquaint the public with the low cost, convenience and speed of long distance calls. For the industry, it means revenue; for the customers, one of the industry's most pleasing and satisfactory services. — *Reprinted from "The Transmitter."*

"The failures of domestic government and the personality clashes are part of the price we pay for a system founded on freedom of personal expression. The rewards far outweigh the penalties, so despite all the uproar over subversion and malfeasance the domestic situation is never really out of control." — (Waltham, Mass., News-Tribune).

(Left to right) WARREN B. CLAY, Hutchinson, Minn., president, United States Independent Telephone Association; MRS. MAYME WORKMAN, executive secretary, Independent Telephone Pioneer Association, Springfield, Ill.; ELNATHAN GATES, vice president and general manager of Minnesota Telephone Co., Minneapolis, Minn. Mrs. Workman is making presentation of life membership certificate in the Independent Telephone Pioneer Association to MISS LURA GOLDING by telephone in Muskogee, Okla. Miss Golding was a former employe of the Iowa Independent Telephone Association for over 40 years and will be 90 years of age on October 15, 1954. Loud speaker hook-up was on the telephone circuit so that the 325 at the luncheon heard the two-way conversation.

"Fifty-Three Years and 475 Miles"

By FRED D. CARL

WHAT MUST have passed through her mind as she heard the operator say — "Miss Lura Golding . . . Des Moines, Iowa, calling"?

It was only a long distance call, placed in the usual manner, to Muskogee, Oklahoma — a town not too far distant. Yet, to Lura M. Golding that call traveled not only 475 miles . . . it also covered a span of 53 years. It was in January, 1901, that she began her telephone career with the Mutual Telephone Company of Des Moines, Iowa, as a long distance operator.

In recognition of this service, Miss Golding received a Life Membership in the Independent Telephone Pioneer Association. Appropriately, presentation of the certificate was made over the telephone by Mayme Workman, executive secretary of the Pioneer Association. Inasmuch as Miss Golding began her career in Iowa, the call was made during the luncheon of the Iowa Independent Telephone Association Convention, in Des Moines, April 6-7. Two loudspeakers were connected to the line in order that all 325 men and women at the luncheon could hear the entire conversation.

When Mayme Workman told her who was calling, and where the call was from, Miss Golding said, "There's no place like Iowa." She remarked that she was wearing high button shoes, shirtwaist, and black skirt to work in 1901.

She was probably recalling her little town of Blockton, in southeast Iowa, where the operator lived in rooms back of the telephone office and took care of the switchboard. Miss Golding, being a friend of the operator, often visited the office and soon learned to operate the switchboard. It was through this contact that she was asked to go to Des Moines to help out for a couple of weeks.

The weeks stretched into months, and from a night operator she moved to the position of bookkeeper in the Independent Telephone Clearing House.

"Modern Service"

AS THE conversation continued, Miss Golding was asked how the service today compared with that of her earlier days. She said, "It's just wonderful. Now you can even talk around the world."

She mentioned that at the time of the cutover in the old Mutual Office she worked around the clock because the supervisor neglected to make arrangements for a relief operator.

In response to Mrs. Workman's question, "If you had it all to do over again, would you choose the same work, Lura?" Miss Golding replied, "Oh yes, I would!" She closed the seven minute call with, "I wish all health and happiness, and I'm proud to be a part of telephone development."

The call and the citation will stand out as a high point in Miss Golding's 89 years; it will take its place among her cherished memories.

Yes — it was only a long distance call . . . something that has become so common-place, so easy, that we are inclined to forget the early struggles; the problems which had to be overcome. In these days of great industrial and scientific research and advancement, the telephone light is often dimmed by the flash of more spectacular developments. But how can anything be more spectacular than the telephone when we consider the following factors:

First — development and advancement of telephone equipment is as dramatic as anything we can call to mind.

Second — the telephone is for the greatest good of the most people. If we were forced to part with many of the wonderous things we enjoy today,

MISS LURA GOLDING in Muskogee, Okla., receiving call from MRS. MAYME WORKMAN, on presentation of life membership in Pioneers.

wouldn't we hold the telephone until nearly the last? Can we point out any adverse effects of the telephone as compared to many other developments of today? Is there anyone who does not somehow, at sometime benefit directly from the telephone?

There is not space here to cover everything that we should consider. But with just those few things in mind, we ask, "Why do other advancements seem more dramatic, spectacular, or more important than the development of telephone service?" The answer is quite simple — it is because telephone people allow other things to seem brighter — it is because they do not flash their light bright enough, often enough, or in enough places to catch the eye of the American public. Perhaps it is because we ourselves do not make enough effort to reflect the greatness and importance of telephone service.

That was one of the impressive things about the call to Miss Golding. She certainly made a mental review of telephone history; she was impressed with the fact, as were those who listened, that in a matter of seconds she was placed in direct contact with many friends who were miles away. She appreciated the service that made possible this clear, easy communication. She knew what it had taken to make it all possible because she had been a part of the growth and expansion.

Prior to the call we visited with Mrs. Workman and with William F. Miller, secretary-treasurer of the Iowa Independent Telephone Association. The latter conceived the idea of making the presentation in the unique, but fitting manner.

During our visit, it was interesting to note Mrs. Workman's vast storehouse of knowledge about her industry. With 47 years of service, as of April, 1954, she is qualified to give us background on telephone development.

She remarked that Lura Golding's career began the same year that President McKinley was assassinated and Theodore Roosevelt became president. The telephone business was 25 years old at that time. It was only a few years earlier that the Independent Telephone movement was born in the middle west.

"Industry Highlights"

AMUSING highlights were brought out by Mrs. Workman. One was the favorite telephone cartoon which showed an individual cutting the cord in order that the instrument might be carried to the person for whom the call was intended.

Early public telephone booths were elegant, with silk-curtained windows with tiny panes, and doors with opaque colored glass. A unique pay telephone was one enclosed in a booth, the door of which locked when the user stepped inside. Payment had to be made in the door lock in order to leave the booth.

Ten years before Lura Golding started working, there were some 10,000 telephone employes and nearly 240,000 telephones in the United States.

Today, the Independent telephone companies alone provide service to more than 9,000,000 telephones in at least two thirds of the nation's communities. Telephones are being added at the incredible rate of 5,000 a day! Eleven thousand cities, towns and villages are being served by 5300 Independent telephone companies. More and more farm homes are enjoying good local and long distance service.

As Mrs. Workman points out, we have come a long way since Lura M. Golding began her work as an operator in 1901 . . . yet we have just begun and there are even greater things to come for the Telephone industry.—THE END

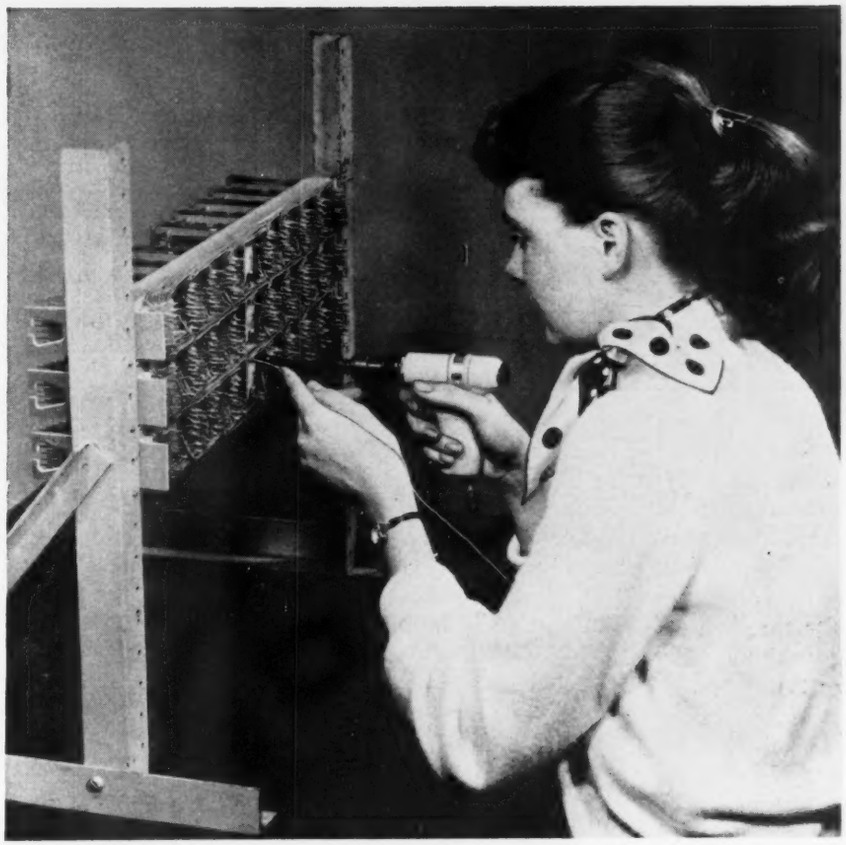
Huge Growth Forecast For General of Calif.

PRESIDENT Edwin M. Blakeslee told stockholders of the General Telephone Co. of California, at their annual meeting, that the size of the company should double in the next decade. He said company forecasts estimate 1,067,000 telephones will be needed for customers in the firm's territory by the end of 1964. At that time plant investment should be about $300,000,000

Butler Named V.P. & Gen. Mgr. Of Commonwealth Of Pa.

HERBERT H. BUTLER has been named Vice President and General Manager of the Commonwealth Telephone Co., an Independent serving about 28,000 stations in northern Pennsylvania.

Formerly president of the Illinois Telephone Co., Bloomington, Ill., a Gary Group subsidiary, for three years, Mr. Butler began his telephone career with the Chesapeake & Potomac Telephone Co. of Baltimore City, and served with that company until entering military service during World War II. He served as a colonel in the Signal Corps.



New pistol-like tool provides fast method of fastening wires to terminaals.

HOW-TO-DO-IT SUGGESTIONS

By JOHN G. REYNOLDS

Iowa reader presents idea for preventing "flying axe heads" . . . "Hydrocap" prevents reduction of water level in a battery . . . New tool "shoots wires" onto terminals.

Another Way to Prevent Axe Heads from Flying Off

REFERRING TO A recent story in this department on suggested methods of preventing axe heads from flying off, *B. F. Clark* of *Appanoose County Telephone Co., Centerville, Iowa,* has submitted a method that he has found to be successful. He suggests that the handle be driven in tight, then a hole bored through the head and handle from the side. A bolt, nail, rivet, or even a wood peg is then used to fasten the head permanently in position. (*See Figure* 1.) For the wood peg the hole should be ¼-inch in diameter and the peg should be driven in for a real tight fit. When a rivet is used, a slightly smaller hole will enable a satisfactory tight fit. To remove the handle for replacement, the rivet (or bolt) is driven out, after grinding off the rivet end flush on one side. If a wood peg is used, the peg is simply driven out.

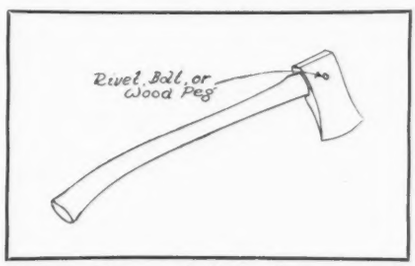


FIGURE ONE — Method of Permanently Fastening Axe Heads.

Bubble Catcher Keeps Batteries Full Longer

"CHECK THE battery water," is a common phrase to every motorist. If a battery doesn't get water when it is needed, severe damage results. But because batteries require water at irregular and infrequent intervals, it is difficult to know just when the lack of it becomes dangerous.

As a result of work completed recently at the University of Miami Electronics Research Laboratories, the necessity of refilling a battery is virtually eliminated. The hydro-

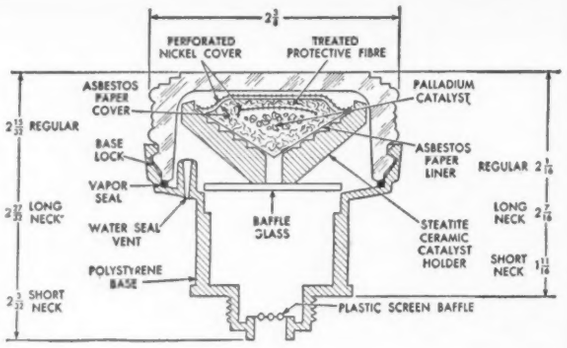


FIGURE TWO:-Cut-away drawing of the Hydrocap showing details of inner construction.

gen and oxygen bubbles that are emitted when a battery is overcharging are captured in a device known as the Hydrocap. Tiny pellets coated with a palladium catlyst, which are held at the top of the cap in a wire cage, reunite the elements and the water flows back into the battery. (*See Figure* 2.)

The caps, manufactured by Industrial Research, Inc., Miami, Fla., retain about 95 per cent of the gases that would otherwise escape. The caps are made to fit any standard size automobile battery.

In addition to preventing reduction of the water level in a battery, the Hydrocap also helps prevent corrosion of the battery cables, caused by acid carrying vapors.

New Tool Shoots Wires Onto Terminals

A REMARKABLE new method of fastening wires to terminals—with a pistol-like tool—making electrical connections without the use of solder, has been developed jointly by Bell Telephone Laboratories and Western Electric engineers and is now in use. Some major units of central office telephone equipment, with millions of the new type solderless connections, have been shipped in recent months and are now at work in the Bell System.

Culmination of more than five years intensive engineering and factory work show that the solderless connections are neater, surer, faster to make and less expensive than the long-familiar type made by hand with pliers, soldering iron and solder. This has been shown by Western's manufacturing studies, Bell Laboratories' tests, and the success of field trials.

The Keller *Wire-Wrap* tool is a metal rod containing two axial holes: a small hole for receiving the skinned portion of the wire, and a larger hole for receiving the terminal, as shown in *Figure* 3. This metal rod is referred to as the Wrapping Bit, the Bit placed on the Terminal and rotated, forming a tightly wrapped coil or wire around the terminal.

Keller *Wire-Wrap* Tools have either an electric or air motor-driven Wrapping Bit which turns within a Sleeve. The Sleeve contains a Wire Anchoring Notch on each side which holds the insulated portion of the lead preventing it from wrapping around the terminal.

The length of the skinned lead determines the number of turns of wire that will result on the terminal. For example, when using 24-gauge wire approximately ¼" bare wire is required for each turn.

Since six turns are required (for a 24-gauge solderless connection) the skinned length should be 1½ inches. For a wrap and solder connection as few as two or three turns may be sufficient.

Greater and greater use of the solderless wrapping technique within Western Electric is progressing along with the conversion of relay terminals and other terminals to the proper shape for solderless connections which will meet the Bell System's standards for electrical connections.

Color Code For Controls In Truck Cab

INEXPERIENCED construction truck drivers find it difficult to identify the winch controls in the truck cabs and may operate the wrong controls, causing accidents to personnel or damage to equipment. This is particularly the case where the controls are located in different positions in various makes of trucks. The hazard of using the wrong controls can be eliminated by painting the control handles different colors, employing a standard color code for all controls; as for example, red for power take-off control, green for winch clutch lever, and yellow for winch brake lever.

Light Portable Digger Economical In First Cost and Easy to Use

THE SUPERMATIC Hole-A-Matic digger and tunneler, illustrated in *Figure* 4, is designed to fill the demand for a complete, self-powered portable one-man operated machine. It digs a hole at any angle four to eight inches in diameter up to three feet deep in one minute. With a shaft extension it will dig holes up to six feet deep. It is well suited for digging holes for setting poles in light rural open-wire extensions and for placing small expansion type anchors.

The Super Hole-A-Matic digger is said to be safe and easy to handle, and competes with more expensive, two-men operated digging machines. It operates in any remote location from a 1.25 KW or greater capacity AC or DC generator. It is claimed that this machine will not bend or break, or throw the operator when the boring head encounters an ob-

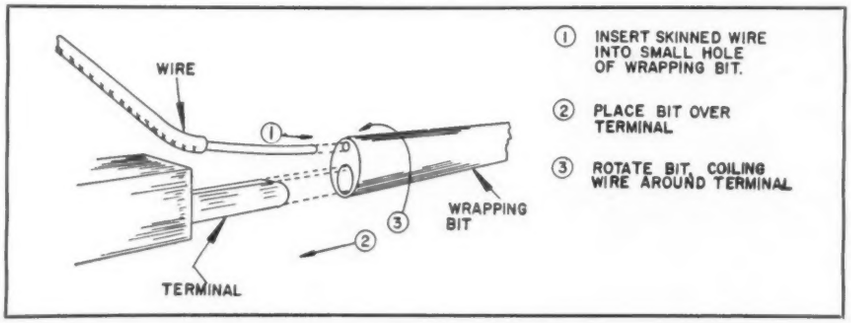

WIRE
① INSERT SKINNED WIRE INTO SMALL HOLE OF WRAPPING BIT.
② PLACE BIT OVER TERMINAL
③ ROTATE BIT, COILING WIRE AROUND TERMINAL
WRAPPING BIT
TERMINAL

FIGURE THREE — The "Wire-Wrap" Tool is a metal rod containing two axial holes — a small hole for receiving the skinned portion of the wire and a larger hole for receiving the terminal. The metal rod is referred to as the "wrapping bit."

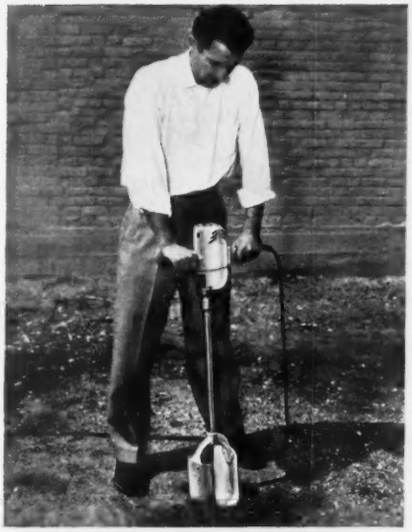


FIGURE FOUR — Super Hole-A-Matic portable digger in use.

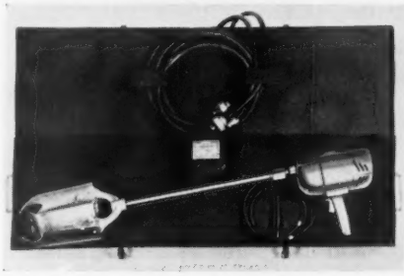


FIGURE FIVE — Super Hole-A-Matic portable digger in carrying case.

struction. Instead, the borer chews up the softer shale and rides above large rocks without damage. The machine's ease of operation is attributed to the pulverizing, grinding action of the boring head.

The boring head and shaft are made of tough alloy steel, hardened under special heat treatments for durability and long service under strenuous conditions of use. The power unit, made by a well known company in the power tool field, has grease sealed ball bearings and extra heavy windings for long rugged use. It operates on a power source of 115 volts dc or ac (60 cycles or less).

The Super Hole-A-Matic digger is available from Multi-Matic Corporation, 14741 Bessemer Street, Van Nuys, California.

"We Need Your Help"

THIS DEPARTMENT is kept alive by ideas provided by readers who have discovered new methods of performing old jobs. If you have a favorite job method or piece of equipment that is saving your company time and money — send it in to this department. Other industry members will benefit from reading your "How-To-Do-It" in Telephone Engineer & Management.

Specify the PEC 369 DUPLEX REPEATER for reliable printing telegraph service

THE PEC 369 Duplex Repeater is especially designed to meet requirements of railroad printer services and is widely used by many of the Nation's large railroads. It is compact, simply adjusted and easily maintained.

The PEC 369 Duplex Repeater uses the high speed circuit covered in AAR Spec 2K22 and provides a wide operating margin in printing telegraph service. One of the outstanding advantages of this Duplex Set over other types, is the fact that all adjustments and checks of operating conditions can be made without the use of external equipment, since test keys, meter and morse key are all an integral part of the PEC 369 Duplex Repeater. In other words this Duplex Set includes its own test facilities.

The set is arranged for relay rack mounting, has an efficient rear dust cover and has an overall panel height of *only* 14 inches. Operating instructions on this Duplex Set should be of interest to all communications groups. Your copy will be sent to you upon request.

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Battery Chargers ☆ Battery Eliminators ☆ D.C. Power Supply Units ☆ Regulated Exciters ☆ and other Special Communicgtions Equipment

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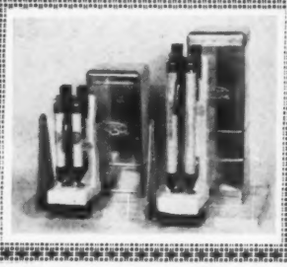

Through the years certain products have been elected—chosen from many—to be represented as quality products in the lines of supplies handled by Suttle. We stake our reputation on their quality and their service performance.

Cook Sub-Station Protectors

The "O" series—all with "TRUE GAP" dischargers—mounted on high-dielectric vitreous porcelain—provide maximum protection, yet are extremely easy to install, and excel in compactness and neat appearance.

Alphaduct Insulated Wires

Modern to the n'th degree—conductors perfectly centered—Neoprene and plastic insulation far superior to old rubber types—adhesion qualities never before attained—year-dated—carton packaged—these Alphaduct wires are truly the finest values ever offered telephone men.

See Your SUTTLE Catalog

Serving Independent Telephone Men Since 1910

Suttle EQUIPMENT CO.

LAWRENCEVILLE ILLINOIS

Telephone Problems In A Changing Era

(Continued From Page 49)

ing program. This program has always had my own warmest endorsement. I think we are fortunate, indeed, that it has actually gotten off to a promising start. But it is only a start. It is a major undertaking which well merits our continued support. That support, so far, has been most gratifying.

We all know that the purpose of this program is to bring home to the American people the salient facts about the Independent telephone industry — facts which have been too long overlooked or ignored. We want to impress upon the American people the fact that there is an Independent operating telephone industry, with its own manufacturers, suppliers, directory publishers, trade press, and related services. We want them to know the size and scope of our Independent industry in terms of communities served, number of telephones, dollar investment, numbers of stockholders and employes, and all such vital statistics.

I will not take your time to repeat the numerous objectives of this worthy campaign because you are aware of them, and have shown through this association that you agree with them, and stand behind them. But looking to the future, I cannot even hazard a guess as to the vast potential of benefits which this program can yield. *This is a good sound program!* I go further and say that it is an essential program — one which we have long needed, and one which we will need even more in the years ahead. We will need it because of the increasing responsibility which these future years are going to place on our Independent industry.

I mentioned to you a short while ago the challenge of the REA cooperatives in the rural service field. Add to that, the challenge of increasing economic pressure due to postwar inflations and demand for plant expansion at high prices. Add to that, the challenge of changing techniques in operations, and the requirements for new and different forms of service under circumstances which have never prevailed before. *All this means, my friends, is that we must have a strong Independent telephone industry in the future if we are to survive as an Independent telephone industry!*

The advertising programs put the spotlight of publicity on the position we occupy as a vital and integrated segment of the telephone industry. By the same token, it can be used to influence the public mind so as to gain recognition of our just needs for our worthy deeds in filling our public service obligations. We are not in a business where we can hide our light under a bushel and stay in business very long. The old story about the man who builds a better mousetrap does not provide a safeguard for Independent telephone companies in the complex period ahead. The world may beat a path to our doorway for service, but unless we are prepared to tell the world what the cost is going to be, and why, we may find ourselves being passed over in favor of service from some other source.

So, I cannot emphasize too strongly the need for continuing on this path of greater publicity, not in the spirit of self-praise or to gain recognition for recognition's sake. I urge it as a necessary tool which will help us do the job which needs to be done, if we are going to hold down our end of the telephone business.

Further, we must be patient. What we do today along this line may not provide a tangible harvest this year, or even next year. Publicity is essentially a seeding operation. But it is elementary that unless we sow, we shall not reap. This year we have started the sowing. I earnestly hope that this program will go on and, if possible, be expanded so that before long the resulting blossoms and fruits will vindicate our good judgment and earnest efforts.

"Making Ends Meet"

SINCE THE END of World War II the telephone industry has been caught squarely between the upper and lower grindstones of rising costs and relatively rigid revenues due to fixed rate structures. It has been an exceedingly difficult task, as we

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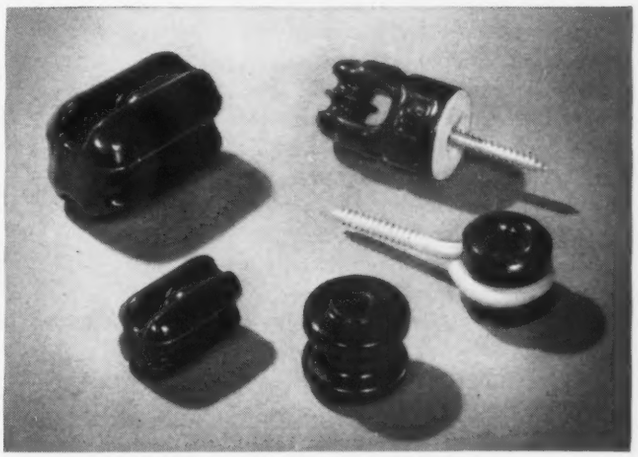

Whether your need be for spools—screw eyes—knobs—guy strain insulators—Porcelain Products 60 years experience assures you better products. Preferred by installers everywhere, this equipment is dimensionally accurate to A.T. & T. specs. These insulators will give you and your customers long reliable service. Write for complete information.

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YOUR TELEPHONE and HOW IT WORKS

By HERMAN SCHNEIDER,
Supervisor of Science, Elementary Schools of New York City
and NINA SCHNEIDER,
Co-author of other elementary science books
Pictures by
JEANNE BENDICK,
author and book illustrator
96 pages, 5½ x 8, illustrated, $2.00

Telephones play an important role in the lives of all of us. The story of this everyday instrument is a fascinating one as told in this book. Everyone will find worthwhile this clear, well-demonstrated presentation of the function of telephones. The Schneiders begin with a simple, nondial phone and manual switchboard and move step by step to a full explanation of the highly complex boards which handle large city, modern telephoning.

The material includes fundamental information on sound vibrations, how they travel, how they are picked up, how they are transmitted by electrical current. It describes in detail the marvelous dial and the selectors which do the work of operators in large exchanges. These and scores of other facts make this a truly wonderful story for anyone who is curious about how his telephone works.

Order from

Telephone Engineer Pub. Corp.
7720 N. Sheridan Rd., Chicago 26, Ill.

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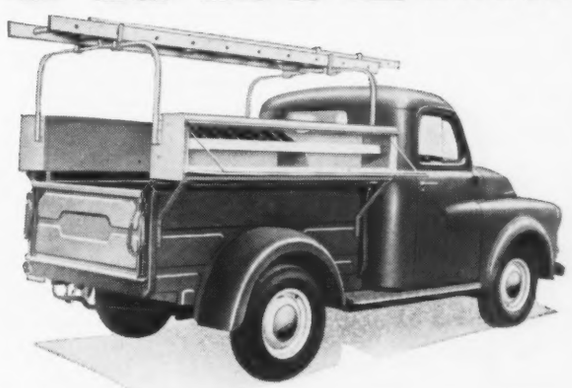

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Quickly...and at low cost...you can mount these All-Steel, Welded Side Boxes on ANY MAKE OR MODEL of pick-up truck. Keep tools and equipment dry, safe, organized.

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all know too well, to break through the regulated rate ceilings and get the increased revenues which are needed to carry out our mission of public service. All too many of our Independent companies, particularly the smaller companies, have not been able to do so. The complexities of a rate case preparation, with all its time-consuming and expensive aspects — have burdened our member companies with hardly an exception.

I wish I could say that we are now emerging into a period of stability, of relative peacefulness — into a veritable Beulah Land, where we will have everything we need, without asking for more. But that, alas, is something that I am afraid that I cannot promise will come to pass during my own administration as head of this association.

It is true that the price indexes are downward on some living costs and some general commodities. But that is not going to make the going much easier for our telephone companies in the near future. On the contrary, we have on one hand the traditional lag in our industrial operating costs experience which always drops far behind changes in general living price levels. We might as well make up our minds that our basic operating expenses are not going to go down very much, if at all. On the other hand, the very fact that our farm subscribers may be getting less income for their butter, eggs, crops, and other produce, and the fact that our city subscribers may be feeling more economic pressure due to temporary slippage in business activity, here and there — all this is likely to create *more* resistance to necessary telephone rate increases.

The solution would seem to lie in a continuation of forthright planning by our member companies for rate changes which will produce needed revenue to keep service up to par and improve it where possible. To risk any other course, to accept temporary deficits or lapses in earnings would be to court financial default if not disaster. I am sorry to say that I can foresee no diminution in the number of rate cases in the period immediately ahead. I can only advise vigilance and adequate preparation of rate cases, so as to convince and persuade the regulatory authorities that our companies are not asking for more than they need.

Autelco Mediterranea, S.A.T.A.P. (Italian affiliate of Automatic Electric Co., Chicago) was prominent among the exhibitors at this year's Milan Samples Fair. Its exhibit had an historical theme, featuring important developments in automatic telephony through the years, from the first Strowger switch (1891) to the latest design, representing the majority of all automatic switching equipment now being installed. Shown above examining a typical Strowger switch are Mr. Bandini (left), Mr. Rossi, and Miss Turri, all of the Autelco Mediterranea organization.

Despite all our efforts to date in many strongly contested rate cases, by both the Bell and Independent companies, the estimated return — even on freshly decided rate cases generally — hovers dangerously near a niggardly inadequate 6 per cent. Those companies, which have not yet asked for increases or which are caught in the toils of procedural delays known as "regulatory lag," are earning less, often much less.

All too often, even the best intentions of the commissions in estimating what rates will yield, fall far short of the mark on actual performance. All too often, even the slender return allowed is still cemented to a strait jacket rate base strictly adhering to original cost long since past.

And these bare bones may be further scraped by a full deduction of a depreciation reserve, no longer remotely related to present-day plant replacement costs. The crying need of our whole telephone industry today, and probably the other utility industries as well, is to win public and regulatory acceptance of a more realistic repricing of our services in relation to the present market.

It has been, and still is, an uphill fight. Some gains have been made here and there in court and commission decisions. The recent decision of the Federal Power Commission to shift from original cost to current commodity price cost in a leading natural gas case is about the most encouraging sign the regulated utilities as a whole have had along this line. This represents some revival of a realistic attitude at the regulatory level. It shows that progress can be made desipte a solid stone wall of well-crystallized precedent which would freeze past policy, regardless of changing economic conditions.

Over the longer range, it is a fair question whether we are not emerging, permanently, into a new plateau of higher costs and, therefore, higher rates. Nobody seriously expects that our American economy will ever go back to the days of the 5-cent cigar or the 5-cent loaf of bread, or the nickel fare on the streetcar. Why, therefore, should anybody expect that we shall ever go back to the old dollar-a-month telephone service, or even the rapidly disappearing 5-cent public pay station telephone call? Those things are definitely buried in the past, along with the old nickel glass of beer and free lunch. Too bad, but we must face facts. The sooner the public and the regulatory commissions accept the inevitability of our particular brand of higher costs, the better it will be for the long-range security of our industry.

You will readily perceive that I have not touched upon all of the important matters, in which our association has been active during the past few months — such as the model pension plan for small telephone companies (just to mention one item).

I only want to leave with you this thought! Notwithstanding all the problems I have touched upon, and those I have not touched upon, we are lucky to be in a great and growing business. I earnestly hope you share with me the thrill and satisfaction of living every minute of it. Forbidding and even discouraging as some particular obstacles may seem at times, we cannot falter in our conviction that the net result is bound to be on our side, a definite success! And that is because we are engaged in a vital and indispensable business. Best of all, it is one so intimately linked with a service to our fellowman! We need only think of this to command an inexhaustible source of all the courage we need, because we know that 50,000,000 *telephones can't be wrong!*—THE END.

Washington Bureau Reports

(Continued From Page 42)

probably would wind up accepting a wage increase instead.

While, as this column was written, CWA and a Bell System organization had signed up at only one point — the Haverhill-Lawrence, Mass., shops of the Western Electric Co. — the piece de resistance was a wage boost averaging slightly more than five cents hourly, and there was no mention made in the settlement announcement that the company will foot the bill for union members' hospital and surgical insurance.

This does not prove that CWA will have exactly the same objectives in other 1954 bargaining, but ordinarily what the union accepts in one location it will also take in another.

Relatively early settlement at Haverhill-Lawrence, without some of the sound and fury that has characterized telephone bargaining in the past, also should indicate a relatively quiet bargaining period in the telephone industry. Generally, that is — there could very well be exceptions, such as the lengthy walkout at the Indiana Bell Telephone Co. last year.

We are now prepared to eat these words, so we will quickly add another prediction to keep our average up in case these comments go sour — Congress will not pass any amendments to the Taft-Hartley Law this year.

REA To Receive $75,000,000 *Loan Fund*

IT HAS BEEN pretty well settled that the telephone loan activities of the Rural Electrification Administration will continue at about the same pace in the fiscal year starting July 1, at least insofar as available loan funds are concerned.

The $75,000,000 telephone loan fund for fiscal 1955 included in President Eisenhower's budget has been carried straight on through by Congress, in approval by the House and by the Senate Appropriations Committee.

REA telephone loans for the current fiscal year have been estimated at about $74,000,000, so that there apparently will be little difference in the next fiscal period.

Congress has shown some tendency in the past year or two to give REA more lending authority than it asks for, with instructions to get out and lend the money, but this does not apply to the telephone program this year, as it did last year. This year, it is the electrification program which is getting the Congressional attention in the way of force-feeding of loan funds to the lending agency.—THE END.

FCC Drops Toll Rate Investigation

THE FCC's LONG-DISTANCE telephone rate investigation, started more than three years ago with an order to the Bell System to show cause why rates should not be reduced, was taken off the books by the Commission recently after a review of the Bell companies' interstate earnings results for 1952 and 1953.

A. B. GORMAN of the Lincoln (Neb.) Telephone & Telegraph Co. was named president of the Frank H. Woods Chapter, Independent Telephone Pioneer Association, in a statewide election last month. Mr. Gorman is advertising manager of the Lincoln company and state chairman of the public relations committee of the Nebraska Telephone Association. Results of the election were announced by retiring president Max C. Walker at the association's annual banquet and reunion held at Lincoln on May 14. Other officers elected were: W. K. Eno, vice president; Marie Vidlock, secretary; and Robert Clifford, treasurer, all of Lincoln. They succeed Roy Carlson, K. J. Boshart and W. K. Eno, respectively. Elected to the executive committee for three-year terms were Mae Meduna of Wahoo and Mary Bornemeier of Lincoln. The Frank H. Woods Chapter represents the state of Nebraska in a nationwide organization of employes with 15 or more years of service in the Independent telephone industry. The chapter was organized in 1941 and has a membership of 500.

Action by the Commission is in line with its efforts to clear its dockets of cases which have become outdated or outmoded by subsequent events. It also reflects joint state-federal commission work now going on in reviewing the results of and experience under the "Charleston plan" of separations. Developments in long-distance telephone rate-making, and the factors which affect it, have come so rapidly since January, 1951, when the FCC proceeding was instituted, that it virtually amounted to ancient history as the docket was terminated last week.

The FCC said in its brief order that it "has reviewed the results of the (Bell companies') interstate and foreign communications operations, as reported by (the companies) for the years 1952 and 1953, and the level of earnings indicated by such results, and has concluded therefrom that further action in these proceedings is not required." Commissioner Frieda B. Hennock dissented, declaring that it is necessary to establish, on a public record, fundamental principles and policies "by which to judge the reasonableness of the Bell System's interstate rates." Commissioner Robert E. Lee was not present during the FCC's consideration of the matter, so that the action was taken by a 5-1 vote.

Concord (N.C.) Tel. Co. Ups Installation Charges

THE NORTH Carolina Utilities Commission has allowed the Concord Telephone Co. to increase and in some cases to double its service, installation and connection charges.

The Concord company serves Concord, Kannapolis, China Grove and Mt. Pleasant. The commission said the new charges are in line with company costs and will cover expenses which otherwise might have to be absorbed by increasing monthly exchange rates.

Customers who have telephones in service will not be affected unless or until they have their telephones moved or changed, and new customers would pay the changes only once, when their telephones are installed.

Blueprint For A Traffic Force

(Continued From Page 58)

answering waiting signals. Observe closely her ringing intervals and voluntary supervision intervals.

Present all succeeding types of local calls as provided for Call No. 1. During all commercial operating periods observe the following but do not interrupt the operator to correct her. Instead make mental notes as to her needs for further drills.

Review of Operating Technique:—

(a) Does she rotate cords?

(b) Does she pick up the answering cord properly?

(c) Does she plug into the answering jack properly?

(d) Does she pick up the calling cord properly and at the same time bring her other hand to the ringing key ready to ring?

(e) Does she sight the multiple jack with her eye while receiving the calling number so as to be ready to move quickly toward the jack as soon as the number is understood?

(f) Does she test the called subscribers' jack correctly? (Multiple office only)

(g) Does she change her cord from one hand to the other when necessary?

(h) Does she pair cords — that is bring the answering cord out from under crossed cords so as to pair cords of a connection and avoid tangled cords?

(i) Does she change a cord in a jack using only one hand?

(j) Does she use the thumb and first finger for ringing? (cam keys)

(k) Does she ring the proper length of time and space her rings?

(l) Does she trace her cords for disconnecting?

(m) Does she grasp her plug properly for disconnecting?

(n) After disconnecting, does she follow the plugs to the socket?

General Companies Report Net Income Increase

CONSOLIDATED net income of the General Telephone Corp., and its subsidiaries for the first three months of this year amounted to $3,324,400, compared with $3,292,800 for the same period of 1953, it was announced last week. Consolidated net income for the 12 months ended March 31, 1954, was $13,983,700, compared with $10,239,100 for the previous 12-month period.

Consolidated operating revenues of telephone subsidiaries for the three months ended March 31 totaled $33,759,100 compared with $30,188,100 for the corresponding period in 1953. For the 12 months ended March 31, 1954, operating revenues totaled $131,517,100 against $108,583,500 for the previous year. Telephones in service on March 31 totaled 1,703,688.

Illinois Consolidated Boosts Revenues in '53

FOR THE FIRST time in the company's history, revenues of the Illinois Consolidated Telephone Co., Mattoon, Ill., exceeded the $2½-million mark as they rose $334,000 from the 1952 level of $2,170,000, President R. A. Lumpkin told stockholders in the annual report. At the same time, operating costs rose from $2,070,000 to $2,298,000, leaving earnings in 1953 of $206,000, compared with $100,000 in the previous 12-month period.

While both revenues and telephones reached new highs in 1953, there was a marked decrease in the company's rate of growth, Mr. Lumpkin noted.

Telephone Bond & Share Income Increases During 1953

NET EARNINGS of Telephone Bond & Share Co. in 1953 amounted to $842,686, compared with $538,050 for the previous 12 months, or an increase of more than 56%, stockholders were informed by President F. S. Spring in the annual report. Consolidated net income of the company and its subsidiaries for 1953 totaled $1,662,562, or 58% above the $1,052,036 recorded in 1952.

Last year net additions to plant were made at a cost of $7,800,000, while in the continuance of this expansion and improvement program the company plans to spend approximately $15,000,000.

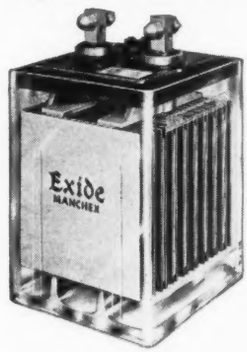
Construction and

WITH THE DOUBLE

STROMBERG-CARLSON

LEADING

Exide-Manchex
telephone batteries



assure positive operation

For Central Office and Private Branch Exchange Equipment

This is proven daily in exchanges of every size . . . for over 60 years Exide Batteries have been serving the Telephone Industry . . . the Manchester positive plate with its exclusive button type construction provides exceptionally long life . . . latest developments on molded glass jars permit compact space saving installation . . . heavy terminal posts with copper inserts provide extra conductivity for sustained voltage at high discharge rates . . . microporous rubber along with slotted plastic separators, are impervious to chemical and electrical reactions . . . plastic spacers assure plate alignment . . . for assured dependability, long life and low-cost maintenance use Exide Manchex.

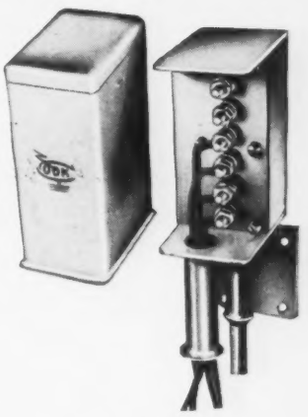
The Electric Storage Battery Co.
Philadelphia, Pa.

1888 . . . Dependable Batteries for 66 Years . . . 1954

tion materials
nd Supplies
OUBLE GUARANTEE OF
RLSON AND AMERICA'S
ADING MANUFACTURERS

for shorter drops... less bracket lines

cook 3-pair XB terminal



An addition to the well-known XB family of unprotected terminals, this development provides far better, more economical means of subscriber distribution out of rural cable.

The 3-pair XB Terminal was especially designed to reduce to a minimum all factors that would cause high resistance and the possibility of line leakage and maintenance. Hence the heavy, close-fitting welded zinc cover; the non-corrosive Monel faceplate on which are mounted the highly insulated cable studs; the use of the flanged tube as an entrance for drop wires. This tube can be completely sealed after the drop wires are installed.

The new Cook Terminal measures 7½" high, 3¾" deep and 2½" wide. It is furnished with or without cable stub, to user's specification.

for longer battery life and service...

the new RAYTHEON "high-rate" RectiChargeR!*

This constant potential battery charger like all Raytheon RectiChargeRs, is completely automatic. It has special dry disc rectifiers plus an exclusive Raytheon Magnetic Amplifier Control Circuit which maintains precise DC voltage output at any load in the presence of wide changes in AC input voltage . . . increases battery life by eliminating over and under charging.

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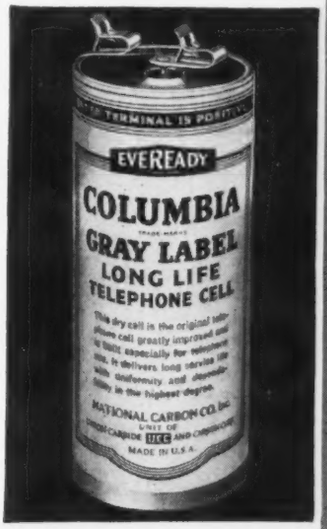
*Reg. U. S. Pat. Off.

long life telephone dry cells

"Eveready" "Columbia" "Gray Label"



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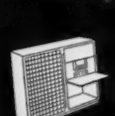
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ARMSTRONG'S GLASS INSULATORS
for communications . . . for power

Toll Compensation

(Continued From Page 52)

iod. It is obvious that toll facility requirements have also increased tremendously during this inflationary period.

All of us are familiar with the "regulatory lag" problem. In recent years we have also been confronted with a pronounced "settlement lag." It is imperative that these two parallel sources of revenue be pursued with equal vigor to meet fully the problem of keeping revenues of the Independents in step with inflated costs. Otherwise, these toll services will be subsidized by other services. We all realize that the days are over when toll service should receive a promotional subsidy.

In connection with this "settlement lag," as I have called it, we Independents must be cautioned that we cannot expect prompt settlement adjustments unless we in turn are prompt in providing the supporting data upon which such adjustments are presently predicated. This need has been made eminently clear by the Bell's insistence upon such data as a basis for upward adjustments.

This interchanged business must be profitable if we are to keep pace with changing telephone technology. Each Independent company must place itself in a position to continue the Independents' tradition of providing industry-wide leadership in the provision of telephone service consistent with the times. The fifty-millionth telephone in the United States was a milestone which few of us expected to see so soon. The progress of conversion to dial operation — extension of modern facilities to rural areas — operator toll dialing — customer toll dialing — and other as yet unforeseen developments in the art of telephony — will overwhelm us, unless we are ever vigilant and maintain a realistic and aggressive approach to these programs. Adequate compensation with respect to interchanged toll service will encourage normal development. In the absence of compensation adequate to promote such development, other telephone companies or public agencies may step in and provide the needed service.

Working together, the 5,300 Inde-

pendent telephone companies are a tremendous force. Coordinated and united effort will utilize this positive power to accomplish the tasks that now confront us. Our Committee cautions that we not be led down the blind alley of complacency by past gains in settlements. Let's each of us do our part in keeping America's "Little Giant" strong and healthy. With your full support, and positive, aggressive action, further substantial settlement progress may be accomplished again this year.—THE END.

Report of

Subcommittee on Extended area Service

TO THE TOLL COMPENSATION AND SETTLEMENTS COMMITTEE:

AT OUR ANNUAL Convention in Chicago on October 12, 1953 the Board of Directors of the USITA approved our Committee's recommended "Basis for Extended Area Service." By reason of our inability to reach agreement with the Bell System on a System-wide basis, negotiations have been conducted with each Associated Bell company where the issue has been raised. The R. E. A., on behalf of a number of its Telephone Co-op borrowers, has been in general agreement with our Committee's EAS recommendations, but because of the necessity of establishing an EAS connection it has been endeavoring to make the most favorable agreement possible with both Bell System and Independent companies. Certain Independent companies have not accepted fully our Committee's "Basis for Extended Area Service," but have continued to insist on terms and conditions which are in some cases substantially different.

Several of the Associated Bell companies have offered EAS on a basis which follows either completely or substantially the recommendations of the USITA Subcommittee on Extended Area Service. Some of the recent proposals of Bell companies are outlined below.

The Wisconsin Bell Telephone Company offers EAS on the USITA Subcommittee basis.

The Pacific Telephone and Telegraph Company considers each case but has recently agreed to EAS with an Independent exchange on the USITA Subcommittee basis. In addition, the Pacific Company has agreed to provide trunk facilities to exchange boundaries, and in those cases where more than 50% of the trunks are furnished to charge the Independent company a rental of $15 per mile per annum.

The Mountain States Telephone and Telegraph Company offers EAS service on the basis of the smaller exchange furnishing the trunks to the base rate area of the larger exchange, except in those cases where the smaller exchange stations are 40% or more of the total stations in the EA, in which cases trunks are provided on a 50-50 basis with no switching charges.

The New England Telephone and Telegraph Company has few potential EAS cases to date. Where the Bell exchange is less than 2500 telephones, EAS is offered on basis of each company providing trunks 50-50 and no switching charge is anticipated. Where Bell exchange has more than 2500 telephones, it is proposed that a switching charge of from 5¢ to 25¢ per telephone monthly would be made, based on ratio of the total number of telephones contributed to the EA by the small exchange. Where large exchange exceeds 20,000 telephones, special studies of costs are proposed.

The Ohio Bell Telephone Company has not yet adopted a definite basis but is favorably considering EAS to its exchanges up to 10,000 stations, with the larger exchange providing the trunk lines to the midpoint of the first toll rate grid and the smaller exchange providing the remaining portion of the trunks, and with no switching charge. Where multi-exchange areas are involved, a special cost study is proposed.

In a special case involving EAS between Ohio Bell's Dayton multi-office exchange and the Liberty, Englewood and Trotwood exchanges, a negotiated agreement on a flat-money basis without establishing any precedent was made. The flat annual money settlement, however, equated out at between 18¢ and 19¢ per telephone per month.

The Southwestern Bell Telephone Company offers EAS on the basis of small exchange providing trunks to the exchange boundary and small exchange paying 40% of the annual carrying charges on that portion of the trunks and terminating equipment provided by the Bell Company.

The Southern Bell Telephone Company offers EAS on the basis of each exchange providing trunks on a 50-50 basis and a switching charge of from 5¢ to 24¢ per month to be paid by the smaller exchange, the charge depending on the ratio of telephones contributed to the EA.

The Michigan Bell Telephone Company has not adopted a definite basis for EAS but in a recent rate case proceeding of an Independent company, the Michigan Public Service Commission refused to allow any payment by the Independent company to the Bell Company for switching service.

In conclusion, your Subcommittee believes that EAS is a matter of increasing importance in the years immediately ahead. It believes the "Basis for Extended Area Service," which is recommended and which was adopted by the USITA Board of Directors on October 12, 1953, is equitable and in the best interests of both segments of the Telephone Industry, and urges its adoption by all Independent companies and further consideration by all Associated Bell companies to the end that a uniform plan be adopted by all companies, particularly for all exchanges of less than 10,000 stations.

Respectfully submitted,

SUBCOMMITTEE ON EXTENDED AREA SERVICE

William C. Henry, Bellevue, Ohio, *Chairman*

Ranford Dunlap, Chicago, Ill.

Fred E. Norris, Muskegon, Mich.

D. T. Strickland, Brownwood, Tex.

SUPPLIER'S NEWS BRIEFS

Kellogg Swb. Names Three Sales Representatives

O. C. BAILEY, assistant sales manager of Kellogg Switchboard & Supply Co., a Division of International Telephone & Telegraph Corp., has announced the appointments of R. F. Bellows, W. J. Camp and H. W. Holland as Sales Representatives.

Mr. Bellows has been assigned to the newly created South Eastern division with offices in Atlanta, Ga., under R. H. Smythe, division manager. Prior to joining the Kellogg company, Mr. Bellows was a machine design engineer for the Silas Mason Co., Grand Island, Neb.

W. J. Camp, former owner of the Avoyelles (Fla.) Telephone Co., has been appointed to the Kellogg company's South Western division as a field engineer with headquarters in Dallas, Texas. Mr. Camp has been associated in the communications industry for over 20 years.

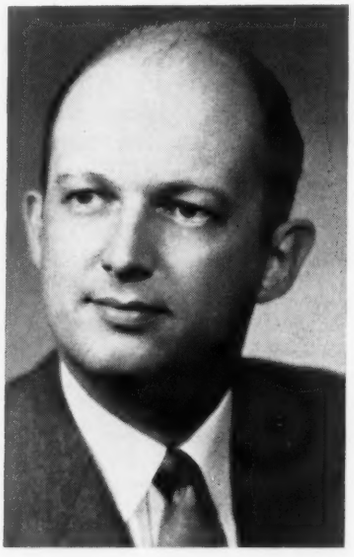
H. W. Holland has been assigned to the newly formed Central Sales division under C. F. Cheney, division manager, with headquarters in Mansfield, Ohio. Before joining Kellogg, Mr. Holland represented the George R. Lyon Co., Cleveland, Ohio.

Cushing and Kastner Exchange Positions

ROEGNER J. CUSHING and Clarence O. Kastner, Stromberg-Carlson telephone representatives have exchanged positions, according to T. C. Thompson, sales manager, and A. B. Preble, manager of the Kansas City branch.

Mr. Kastner, until recently sales representative for Missouri, becomes office manager of the Kansas City Branch and Mr. Cushing, who has held this post, moves into the field as telephone sales representative for Missouri.

CLARENCE O. KASTNER, office manager, Kansas City Branch, Stromberg-Carlson Co.



ROEGNER J. CUSHING, Missouri sales representative of Stromberg-Carlson Co.

Mr. Kastner, whose recent illness prevents an undue amount of travel, will continue to serve his friends from his new position as office manager, and Mr. Cushing, in taking over the Missouri territory assignment, has personal acquaintances with all Independent telephone managers in his area.

Mr. Kastner began service with Stromberg-Carlson in 1936. After two years in the Kansas City office, he became sales representative for the states of Oklahoma, Arkansas and southern Kansas. In 1945 Mr. Kastner took over the state of Missouri. During this period the Capitol City Telephone Co. of Jefferson City installed its XY Dial office.

Mr. Cushing has been with Stromberg-Carlson since 1941. After college training in both engineering and business management, he was employed first in the Cost Department and then in production Engineering. Transferred to Kansas City, Mr. Cushing had broad contacts with most of the telephone companies served from this office. Further contacts developed through state conventions and meetings and many sales trips with Mr. Kastner in Missouri.

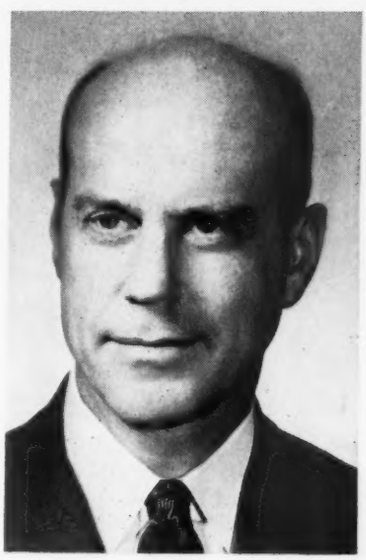
Hans Y. Kraepelien Elected North President

EFFECTIVE JUNE 1, 1954, G. A. Berting has been elected chairman of the board of the North Electric Manufacturing Co., Galion, Ohio, and Hans Y. Kraepelien has been elected president.

Mr. Kraepelien has been with L. M. Ericsson Co. for 25 years. Prior to World War II he was employed in operations with the Ericsson companies in Poland and Italy. Subsequent thereto he became a staff engineer working in Stockholm. After coming to the U. S. in 1945, Mr. Kraepelien was made president of Ericsson Telephone Sales Corp. in New York.

Mr. Kraepelien is a graduate of the

L. A. BERTING, chairman of the board of the North Electric Manufacturing Co.



HANS Y. KRAEPELIEN, president of the North Electric Manufacturing Co.

Royal Institute of Technology, Stockholm, Sweden, and presently is completing the Advanced Management Program of the Graduate School of Busiess Administration, Harvard University. He is an American citizen, married, and has two daughters and two sons. One daughter is a junior in Marietta College at Marietta, Ohio. One daughter is in Senior High School. One boy is in grade school, and one in kindergarten.

Highway Trailer Co. Holds Stockholders Meeting

AT THEIR ANNUAL meeting, the stockholders of the Highway Trailer Co., Edgerton, Wisc., were informed that sales of $15,163,399 for the year

Please Turn To Page 101

ALPHADUCT DROP WIRE

carton packaging

saves you time and money

- easier to handle
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- stacks neatly, saves space
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The cartons are easier to handle than loose coils. They can be stacked higher without danger of falling and the wire on the bottom will not be crushed or bent. Space is saved, inventory taking is simplified, and the possibility of injuries to workers from tumbling coils is removed.

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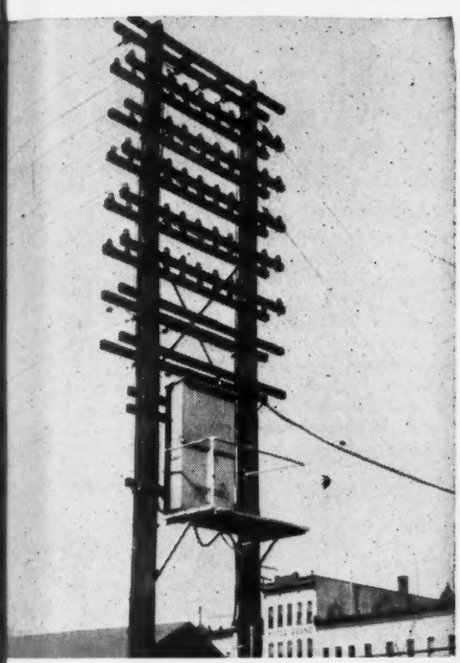

Economy in Overhead Construction is assured when crossarms made by the CONTINENTAL CROSS-ARM COMPANY, INC., are a part of your wire and pole installations. Fully seasoned American woods — built to sound standards of dependability.

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For Lowest Cost Rural Lines — Copperweld O-Eighty-Thirty Line Wire provides good conductivity, rust resistance and permanent high strength for safe long spans. Light weight saves in construction costs. Made by COPPERWELD STEEL COMPANY.

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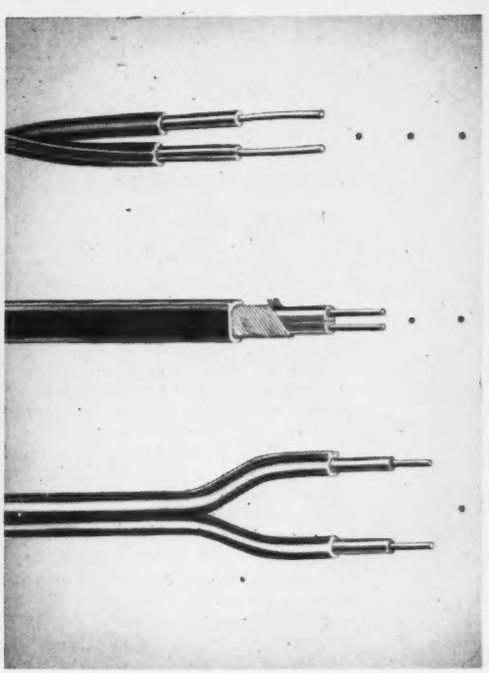
Uniform High Quality is the characteristic of all PORCELAIN PRODUCTS, INC., Knobs and Tubes . . . all specially produced to exacting specifications and made to guarantee top quality in insulation and top performance for telephone installation.



Lines Need Replaced! Keep your maintenance and replacement costs down, with DIAMOND WIRE & CABLE CO.'S RED-D Drop Wire. Superior adhesion, conductivity, tensile strength. Available in Copperweld and Signal Bronze.

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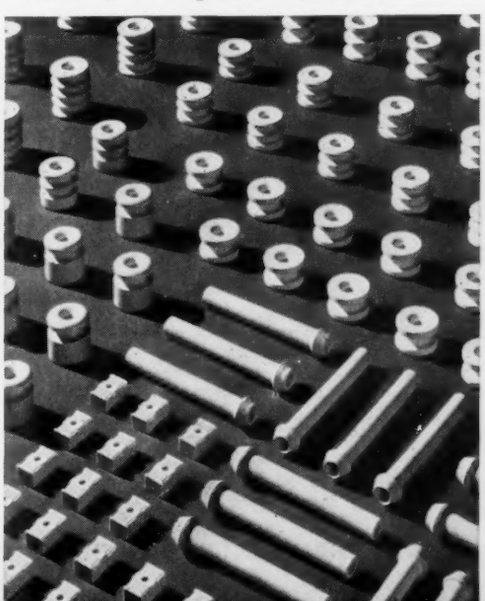
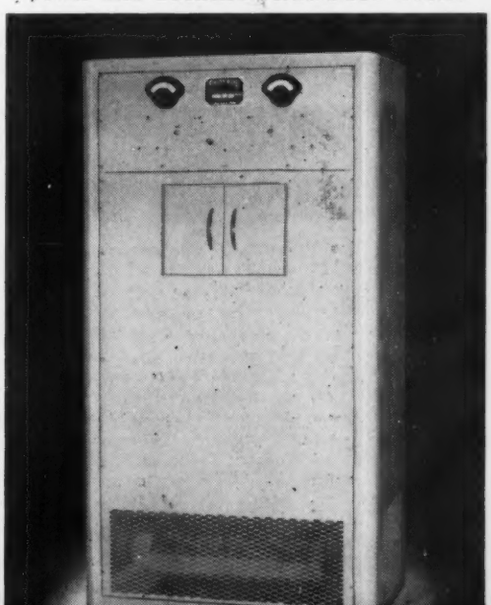
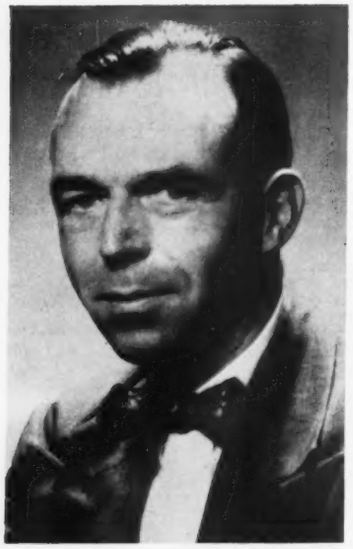
Automatic Constant Voltage Battery Charger! By adding the proper 3-phase FLOTROL to your exchange you can maintain full-floating operation, cut down running time on your rotary equipment, and save on your power bill. LORAIN PRODUCTS CORP.





PEOPLE IN THE NEWS



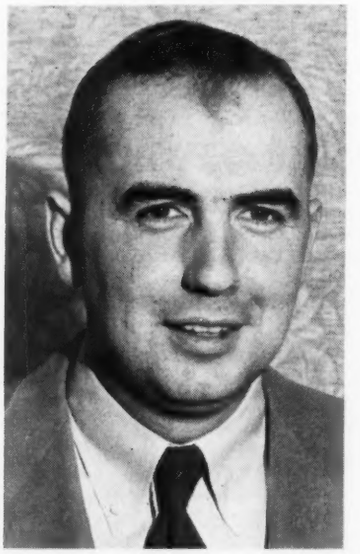
JOHN L. MARSH has joined The Ansonia Wire & Cable Co. as sales representative covering the states of New York, Massachusetts and Rhode Island. His address will be 400 East 56th Street, New York City. Mr. Marsh has had 12 years experience in the cable business in New York, Indianapolis and Chicago. As a Lieutenant Commander in the Navy during the year 1951, he was attached to the Bureau of Ships, Washington, D.C. He had extensive experience working with all manufacturers of all types of shipboard cable. He was born in Bridgeport, Connecticut and was graduated from Dartmouth College in 1936. During World War II he served for three years and was called back to duty in November, 1950 for 18 months.

Line Material Co. has announced that FLOYD M. McKENNA, a field engineer in the Southwest Division since 1949, has been selected to replace Wm. A. Bracey in Dallas. McKenna will be available to assist customers with apparatus application problems in Texas. He received a B.S. in engineering from Texas A&M in 1939 and spent the next 10 years in the utility field. McKenna is a registered professional engineer in Texas and a member of AIEE.

The Reilly Tar & Chemical Corp., Indianapolis, Ind., has announced that A. F. McDONALD has been placed in charge of its new sales office, 3049 E. Grand Blvd., Detroit, Mich. This new office handles the complete line of Reilly products . . . coal tar and synthetic chemicals, pipe enamels, road tars, roofing materials and other protective coatings.

National Pneumatic Co., Inc. and Holtzer-Cabot Divisions, Boston, Mass., have announced the appointment of HARVEY J. FINISON (above) as director of engineering. Mr. Finison was formerly associated with the Armour Research Foundation, Chicago, Ill., as an executive in research and development; and has had broad experience in the application and development engineering field.

CHARLES L. STROUP, who has been chief engineer for Hubbard & Co., has been made vice president in charge of research. His headquarters will continue to be at the Chicago plant, where he has been since joining the company. Mr. Stroup's experience in the electrical industry is widely diversified. A graduate of L.S.U., he worked for a large power company and later for an insulator manufacturer before coming to Hubbard & Co. in 1940.



DON POLLOCK has joined the telephone division of Reliable Electric Co., Chicago. Mr. Pollock started in the telephone field in 1944, as a groundman. During the summers after 1944, through 1950, he worked as a lineman, cable splicer's helper, and trouble-shooter. In 1951, he entered the army, going into the Signal Corps branch. While in the army, he attended the Carrier Repeater School at Fort Monmouth, N. J., for 7½ months. Upon completion of the Signal School, he was sent to Korea and spent 15 months operating voice and teletype carrier, and radio relay systems. Upon returning to the United States, in 1953, he was sent to the Southeastern Signal School at Camp Gordon, Ga., where he taught general and beginning theory on voice and teletype carrier systems to R.O.T.C. Cadets

Continued From Page 97

1953 were $4,652,310 greater than sales in 1952. H. J. Meagher, president, further reported that the company began its 37th year as a trailer manufacturer and entered the year 1954 with vigor, optimism and a competitive and aggressive sales program.

In order to accomplish wider and more effective coverage of both the truck-trailer and public utility equipment domestic and export fields, the company has discontinued its branch offices and inaugurated a sales program with emphasis shifted to a distributor and dealer arrangement. New distributorships have been set up in such key cities as Chicago, Detroit, St. Paul, Cincinnati and Pittsburgh, as well as other main trucking centers in the United States, to replace Highway branch offices.

Automatic Names Smith Ill. Sales Representative

PHILIP F. SMITH, formerly of the Installation Department of Automatic Electric Sales Co. has been appointed Automatic Electric Sales representative for the state of Illinois. He will fill the position left vacant by the recent death of Frank J. Piller.

PHILLIP F. SMITH

Mr. Smith first entered the communications field during World War II as a member of the Army Air Corps. After training at an Army radio school, he served as a radio operator with the 13th Air Force until his discharge in 1946. He came to Automatic Electric in 1949, following 2½ years in the Installation

Please Turn To Page 103

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Rates are Reasonable — Write for details

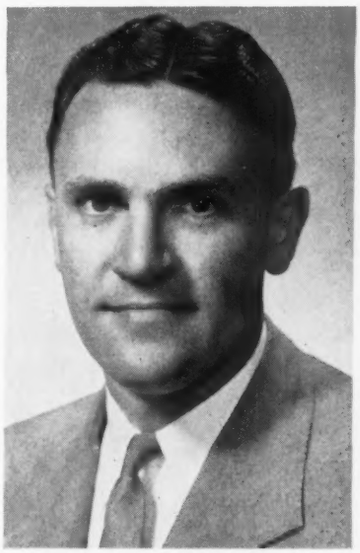
Continued From Page 101

Department of Western Electric. Supplementing his wide knowledge of central-office equipment and practices, Mr. Smith has been employed in recent months in Automatic's Supply Department.

Mr. Smith is a native of Illinois, born and reared in Chicago, and is already well acquainted with his sales territory. He will establish headquarters in Galesburg.

K. R. Rickey Elected To Lenkurt Board

KENNETH R. RICKEY has been elected to the board of directors of Lenkurt Electric Co., San Carlos, Calif. Mr. Rickey joined Lenkurt



K. R. RICKEY

as financial coordinator in June, 1953 and was appointed controller four months later.

Prior to his association with the electronics firm in California he was secretary-treasurer of Curtis Lighting, Inc. of Chicago for seven years.

Lenkurt directors re-elected at the annual meeting were L. G. Erickson, Kurt E. Appert, George P. Koth, Philips B. Patton, and Martin Lindsay.

Stromberg-Carlson Names Three Technical Writers

APPOINTMENT of Jacques S. Herman, William J. Belleville, and William J. Synal as technical writers for the telephone division of the Stromberg-Carlson Co., Rochester, N. Y., has been announced by Frederic W. Haupt, advertising manager for the Telephone and Sound Divisions.

They will be engaged in writing technical manuals, instruction books

Give the GUY a CHANCE

the CHANCE "Blackfoot"

Holds more - Goes down faster

CAN BE INSTALLED BY MACHINE TO CUT LINE CONSTRUCTION COSTS

PITCH CONTROLLED

This accurately pitched, fast cutting blade really goes down fast. Every size anchor is individually "pitch controlled."

SMALLER HUB

The smaller hub on Chance Screw Anchors means less friction—easier installation. Less earth is disturbed during installation. That's why the Blackfoot has greater holding power.

Power companies trying to trim costs can profit by the experience of a Florida Utility where the use of the big Chance 15 inch Screw Anchor was combined with machine installation to reduce anchoring costs.

The use of the fifteen inch Blackfoot permitted one anchor to take the place of several smaller ones. This added up to a considerable saving in material costs. Speedy machine installation—with fewer anchors to install—slashed installation time to a small fraction of what was previously required.

How did these anchors hold?

Company personnel conducted their own pull tests to determine the holding power of these Chance Anchors. The dynamometer showed *no* creep at 22,000 pounds!

You can protect your investment in line construction by specifying Chance Anchors for your guys. They really hold the load!

ABC INDUSTRIES

A·B·CHANCE CO·

CENTRALIA, MISSOURI

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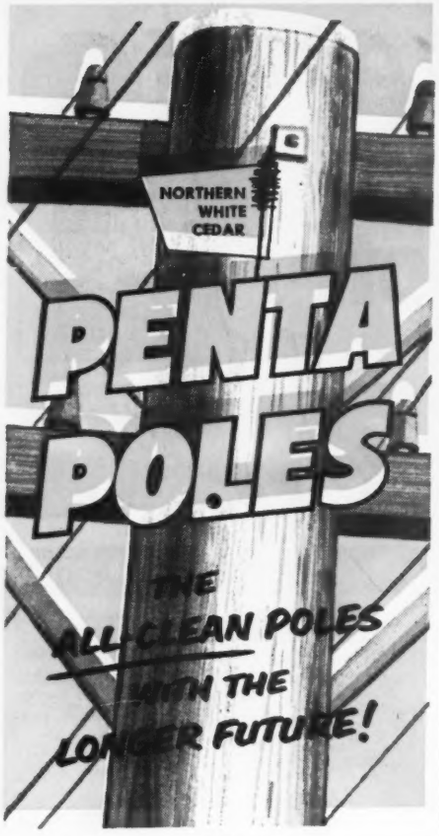

Nature grows them sturdy, with ample bearing at ground-line. Page and Hill adds years and years to their service expectancy. P & H Northern White Cedar Penta Poles mean low pole-line maintenance costs — higher yearly profit.

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JACQUES S. HERMAN

WILLIAM J. BELLEVILLE

and similar literature for the telephone division of the company, principally in the field of government contracts.

Mr. Herman is a native of New York City, and served in the U. S. Navy for three years during World War II. He attended New York University, and for the past five years has been with the Signal Corps Publications Agency, Fort Monmouth, N. J.

Mr. Belleville is a native of Worcester, Mass., and attended Leicester, Mass., Academy. He served 13 years as selectman in Leicester, and was a deputy sheriff in Worcester County. He is a veteran of World War I, and is a former commander of the American Legion post in Leicester, Mass.

He has been engaged in writing for many years. From 1909 until entering the U. S. Army in 1917 he was on the editorial staff of the Worcester, Mass., Telegram. After his discharge in 1918 he joined the editorial staff of the Worcester Evening Post, serving until 1938. Subsequently he was with the Publications Department of the New England Electric System for 5 years, and has been a technical writer for the Signal Corps Publication Agency for the past 11 years.

Mr. Synal was born in New Hartford, N. Y., and was graduated from the New Hartford High School. He served with the Signal Corps of the U. S. Army in the Dial Central Office at Fort Knox, Ky., from August, 1946, to January, 1948, and subsequently was an instructor in dial central office maintenance for the Signal Corps at Fort Monmouth, N. J. For the past year he also has been a technical writer for the Signal Corps Publications Agency.

WILLIAM J. SYNAL

New Pamphlet on Scherr Micrometers

THE GEORGE SCHERR CO. has announced a new 4-page pamphlet on Scherr Micrometers, furnished in two styles, series 900 with "Lustro-Chrome" dull finish throughout, and series 800 with black enamelled drop-forge steel frame and, as a new feature, "Lustro-Chrome" dull chrome finished thimble and barrel. All micrometers up to the 3″ size read in 1/10,000″ at no extra cost.

The pamphlet includes illustrations of micrometers being adjusted for wear by an exclusive method, of micrometers being checked for accuracy with Gage Blocks and for

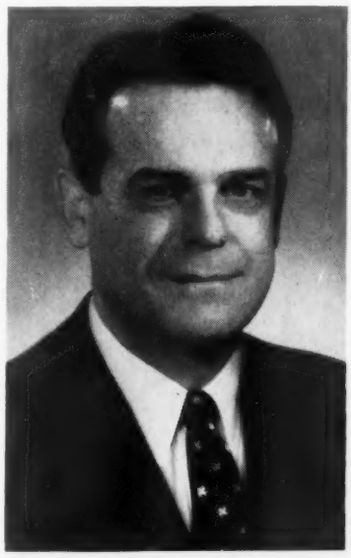
parallelism with Optical Parallels, of a Toolstand used for clamping a micrometer, of Micrometer Sets in various combinations, and of Depth Micrometers.

A price list inserted in the pamphlet contains, in addition to prices on all items in the pamphlet, a listing of Scherr Ultra-Chex Gage Blocks in three types of sets.

Copies of the pamphlet with price list may be obtained from George Scherr Co., 200 Lafayette St., New York 12, N. Y.

Bruce Quisenberry Joins Automatic Electric Staff

AUTOMATIC ELECTRIC Company has announced the appointment of Bruce Quisenberry, formerly chief of the office of technical liaison of the U. S. Army Signal Corps, as assistant director of publicity, effective May 24. In his new position, Mr. Quisenberry will work closely with the company's director of publicity, H. E. Clapham, undertaking various assignments relating to publicity as well as public and personnel relations, to fill the need created by the Company's continuing expansion in the telephone and industrial fields.



BRUCE QUISENBERRY

A native of Joplin, Mo., Mr. Quisenberry has studied at the University of Missouri, UCLA, Yale, and the American University in Washington, D. C. He comes to Automatic Electric with a background of varied experience in public relations and communications work, much of it acquired during 12 years of association with the Signal Corps. Prior to his work with the Signal Corps he was engaged in various types of sales promotional and publicity activities.

Mr. Quisenberry entered the Army as a private in 1942. Upon graduation from Officer Candidate School in 1943, he was appointed a special assistant to the Director of Military and Civilian Personnel at the Signal Corps Training Center at Fort Monmouth. In 1944, he was assigned to overseas duty as an assistant G-1 (Personnel) in the China theater of operations, where he remained until the war's end.

After receiving his discharge in the rank of major, Mr. Quisenberry was named Chief of the Office of Technical Liaison at Signal Corps headquarters in the Pentagon, in which office he handled work of a public relations and communications nature. The effectiveness of his services in this capacity is attested by a Department of the Army citation for meritorious civilian service, which he received upon terminating his association with the Signal Corps. The citation singles out for special men-

Please Turn To Page 110

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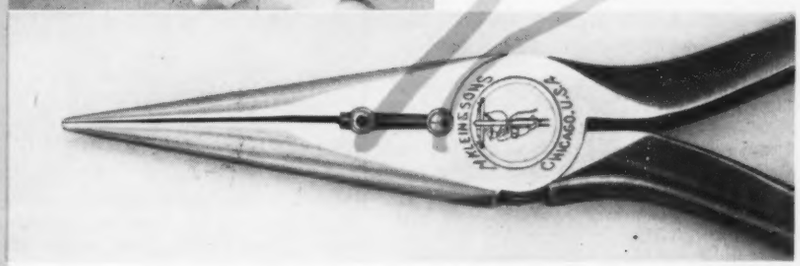
For 19 Gauge Wire

For 22 Gauge Wire



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Klein Pliers
strip plastic wire
faster, easier,
without nicking

These Klein pliers have two cutting openings — one for 19-gauge and one for 22-gauge wire —that clamp over the plastic insulation and strip it off without ever touching or injuring the conductor.

No more risking wire nicks with improper tools. With these special pliers you can safely strip a whole row of insulated conductors in the time it ordinarily takes to strip just one. And they'll perform all the other work you have for long-nose side-cutting pliers.

So make Klein's Stripping Pliers a part of *your* splicing or installing kit; save time and protect your wire. Automatic Electric proudly offers these pliers to you. Order from the nearest warehouse today!

S-5743—$38.80 per dozen.

Recommended and sold through our distributors

AUTOMATIC ELECTRIC

Distributors in U. S. and Possessions: AUTOMATIC ELECTRIC SALES CORPORATION
Export Distributors: International Automatic Electric Corporation
1033 West Van Buren Street, Chicago 7, U. S. A.

NEW PRODUCTS' SHOWCASE

NEW SAFETY PLATFORM LADDER: — This New Magnesium Safety Platform Step Ladder has been designed to provide a broad working platform two feet from the top. In construction it is much like the standard magnesium step ladders and folds away with the same ease. It is particularly attractive because of the extreme safety that it provides to the user. The platform is ribbed and fluted to prevent skidding, thereby allowing the user to stand without tiring for long periods of time. There is complete freedom of movement and a person working on this Magnesium Safety Platform Step Ladder can use both hands in any direction.

These New Magnesium Safety Platform Step Ladders are so light in weight that they can be handled with ease by plant maintenance men and even by a stenographer or housewife. They fold compactly — require no additional storage space — are provided with hard-rubber, non-skid feet — conveniently placed bucket rack and a top tool rest.

The ladder as illustrated is the 6' overall size (4' to height of platform), weighs 12 lbs., and sells for $29.00. Other sizes range from 4' (2' to platform) to 10' (8' to platform) and are correspondingly low in weight and price.

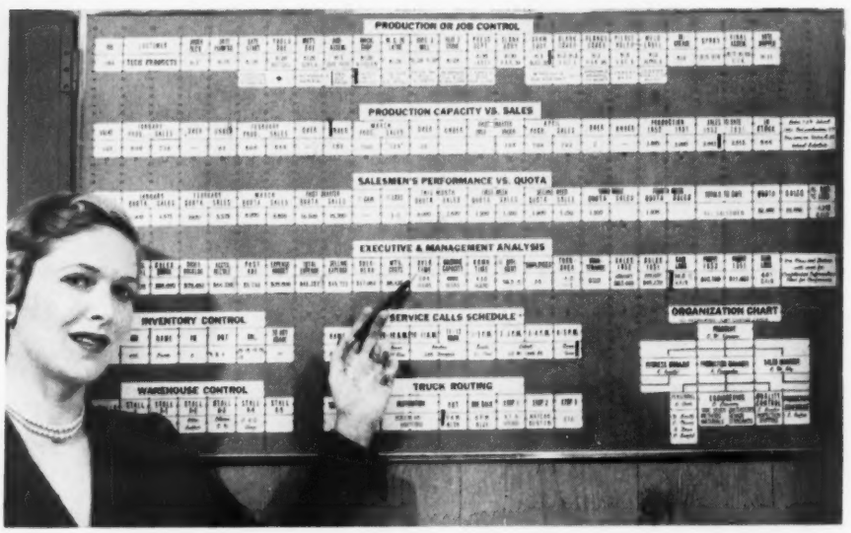
For further information and literature, Check New Product 629.

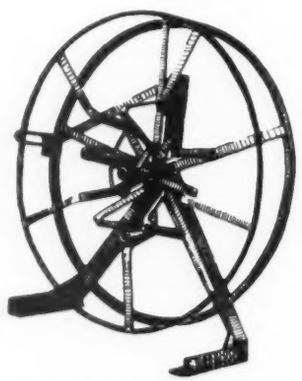
CONTROL BOARD:—To see at a glance all the facts in any situation, business offices and industrial plants in increasing numbers, are utilizing the new "Flexi-Trol" Visual Control Board. It is being used for production schedules, sales records and quotas, personnel analysis, management control and analysis, service schedules, inventory control, traffic control and routing, warehouse control, organization rosters, organization charts, honor rolls and a host of other purposes.

The advantages to the user are numerous. Records maintained on the "Flexi-Trol" board cannot be lost or misplaced. Deadlines, shortages, and overdue items are highlighted before they become serious. Responsibility for a given job is fixed. All persons concerned consult the same record. These improvements result in greater efficiency and savings of time and money that quickly pay for the modest cost.

A complete "Flexi-Trol" board of standard size (42" wide x 24" high) ready for operation and accompanied by 1000 of the cards used for posting data on the board, costs $57.50, f.o.b. Staten Island. A "confidential" model is supplied with hinged covers that can be closed-over to hide the record. This model costs $67.50. "Flexi-Trol" is sold on an unconditional, money back guarantee within a 30-day period.

A brochure giving greater detail is available from the manufacturer, Methods Research Corporation, 442 Mosel Ave., Staten Island, N. Y.—Check New Product 630.





WIRE REELS:—The Whitaker Reel Manufacturing Co., Monroe, La., has announced the addition of two new reels (736 and 530) to its line of reels.

The stands for both reels are the same, except brake arm is longer on No. 736. The reels are the same except No. 736 is 36 inches outside diameter and has 10 coil supports, and No. 530 is 30 inches outside diameter and has eight coil supports. The center supports are for coils 16 inches in center (coils with 16-inch eyes).

Both reels are adjustable to take coils from five inches to eight inches thick. Each has a reversible automatic brake (by loosening one bolt, reversing brake shoe, re-tightening bolt), which can be used as brake or as friction stop as desired. Reels can be used on either side of truck.

The bracket for holding the reel consists of a 2 by 2 by ¼" angle iron with a 1-inch cold rolled shaft for the reel to turn on. It has a reversible, automatic brake so that bracket can be used on either side of the truck. With changes, the brake can be flipped over and used as friction stop. Two 12" and one 6" piece of 1½" by 1½" by 3/16" angle iron with holes for fastening bracket in truck, are furnished. It has a catch in center for retaining reel on shaft and a trigger to hold brake out of contact when changing coil of wire.

The reel is made in two sections, front and rear, that are meshed into each other so that the coil supports are held equal distance apart.—For Complete Data, Check New Product 631.

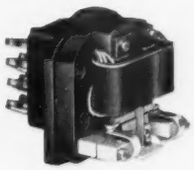
THE BUYERS' GUIDE

A New Aid for Telephone Users

TELEPHONE SHELF:—This unit consists of a telephone shelf with a keyhole slot so that it can be moved from place to place with the telephone and instantly fastened to the wall, a desk, or other fixed piece of furniture. The shelf is equipped with a platter that the telephone directory fastens in, and has a receptacle that the directory can be concealed in when not in use. There is a flange on the bottom of the platter that fits on the upper front edge of receptacle so the directory is held in an upright position and its pages can be turned with one hand. The unit has a card folder fastened in the center of the directory for recording private telephone listings in. This folder is removable and can be transferred to new directories.

According to the Whitaker Reel Manufacturing Co., Monroe, La., the telephone cannot be pulled from the shelf by pulling on the cord, a valuable safety feature when small children are around.

A receptacle and platter without shelf is available for those who have a shelf or built-in telephone cabinet.—For Complete Data, Check New Product 632.



POLAR RELAY: — Developed by Western Union as an improved replacement for the W. U. Type 17 Polar Relay, the Series PTW Polar Relay promises to have important applications in many fields of communication and electrical control. Automatic Electric Co., 1033 West Van Buren St., Chicago, has been licensed to manufacture this new relay.

The Series PTW is substantially smaller than the W.U. 17; the entire assembly, complete with cover, measures only 2-11/16" in height (plus 5/8" projection of the banana-type plug connections). The cover, base, and plug housing are single black phenolic moldings that will not affect the magnetic circuits they enclose. The snap-on cover is easily removed for visual examination of the relay. The base carries most of the relay components on the front, and a permanent magnet in a depression on the back.

The Series PTW Polar Relay can be quickly and easily adjusted to meet specified performances. There are no critical adjustments involved. Coils are wound in four sections; sensitivity as low as 2 milliamperes can be obtained by placing all coil windings in series-aiding. The travel time ("break" — to "make"), or the period of time when the armature is in transit and touching neither contact, will vary with the degree of energization of the operating windings. With the standarized 0.006" contact gap of the PTW and (for instance) energization of 98 ampereturns (35 milliamperes) through either of the main line windings, the travel time is approximately 0.9 of a millisecond. The relay is tested to operate at 60 "cycles" (make-to-break-to-make) per second, with approximately 75% total make on both contacts.

This new relay is described in Circular #1814. — For your copy, Check New Product 633.

ADVERTISING, Directories — Planning, Selling, Compiling, Producing, Publishing and Distributing — backed up with over 43 years of Directory Experience and Knowledge. Write or call L. M. Berry & Co., Hulman Bldg., Dayton, Ohio.—[ADV. 1]

ADVERTISING, Directories — *General Telephone Directory Co., 604 Pine Ave., Long Beach, Calif., and 1800 Busse Highway, Des Plaines, Ill.*—[ADV. 2]

BELTS — CLIMBERS — COMPLETE LINEMEN'S EQUIPMENT, *W. M. Bashlin Co., Bashlin Bldg., Grove City 1, Pa.*—[ADV. 3]

BELTS — CLIMBERS — PLIERS — SAFETY STRAPS — CONSTRUCTION TOOLS. *Klein & Sons, Mathias. 3200 Belmont Ave., Chicago 18, Ill.*—[ADV. 4]

BOOTHS—Acoustic Telephone — *Sherron Metallic Corp., 1202 Flushing Ave., Brooklyn 6, N. Y.*—[ADV. 5]

BRUSH & WEED KILLERS — *Thompson manufactures many types of brush and weed killers. Write for helpful information on specific problems. Thompson Chemicals Corp., St. Louis 3, Mo.*—[ADV. 6]

CABLE, All Plastic, *Aerial, Duct, Direct Burial, PBX, Switchboard. — The Ansonia Wire & Cable Co., Ansonia, Conn.*—[ADV. 7]

CORDS, Switchboard (with or without plugs), Instrument (retractable and regular) and Operators — *Commercial Cord & Supply Co., Inc., 26 Main St., Clifton Springs, N. Y.* —[ADV. 8]

CORDS, Switchboard & Telephone — *Runzel Cord & Wire Co., 4727-31 Montrose Ave., Chicago 41, Ill.*—[ADV. 9]

ELECTRIC HOT WATER HEATERS. *Thermostatically controlled for any hot water heater, Vulcan Electric Co., Danvers 17, Mass.*—[ADV. 10]

ENGINEER, CONSULTING — *Telephone financing — J. E. Albert, 185 N. Wabash Ave., Chicago 1, Ill.*—[ADV. 11]

FURNACES — For quickly and economically melting lead and paraffin — *Mutual Liquid Gas Equipment Co., Inc., 3600 W. Imperial Highway, Los Angeles, Calif.*—[ADV. 12]

INSULATORS, Porcelain — *Porcelain Products Inc., Box 300, Findlay, Ohio.*—[ADV. 13]

LIGHTWEIGHT PULLERS — *Coffing Hoist Company, 800 Walters St., Danville 5, Ill.*—[ADV. 14]

PIPE PUSHERS — *Giant Manufacturing Co., South 6th St., at 12th Ave., Council Bluffs, Iowa.*—[ADV. 15]

POLE HOLE DIGGERS — *For derrick mounted trucks. Tele-E-Lect Products, Inc., 9613 Minnetonka Blvd., Minneapolis 16, Minn.*—[ADV. 16]

POLES, Southern Yellow Pine — *Colfax Lumber & Creosoting Co., Inc., P. O. Box 23, Pineville, La.*—[ADV. 17]

POLES, Southern Yellow Pine — *Taylor Colquitt Company, 290 E. Main St., Spartanburgh, S. C.*—[ADV 18]

POLES, Southern Yellow Pine — *Texas Creosoting Co., Orange, Texas.*—[ADV. 19]

PROTECTIVE EQUIPMENT — *Reliable Electric Company, 3145 Carroll Avenue, Chicago 12, Ill.*—[ADV. 20]

REBUILT TELEPHONE & SWITCHBOARDS — *Telephone Repair & Supply Company, 1760 Lunt Avenue, Chicago 2, Ill.*—[ADV. 21]

TRUCK BODIES — *Highway Trailer Co., Edgerton, Wisc.*—[ADV. 22]

WIRE, Insulated — DATED DROP WIRE — Neoprone or Weatherproof — *Alphaduct Wire & Cable Co., Milltown, N. J.*—[ADV. 23]

WIRE, Insulated Drop and Bronze or Copperweld — *Acorn Insulated Wire Co., Inc., 36 Freeman St., Pawtucket, R. I.*—[ADV. 24]

WIRE, Telephone, *for all inside and outside uses — Whitney Blake Co., New Haven, Conn.*—[ADV. 25]

For complete information on the products and services described in thi department send in the coupon which appears on this page. If you do not see a listing of the products and services that you are interested in, write BUYER'S GUIDE, 7720 N. Sheridan Road, Chicago 26, Ill. The information will be furnished quickly and without charge to telephone industry members.

SEND IN THIS COUPON FOR MORE INFORMATION

Telephone Engineer Publishing Corp.
7720 N. Sheridan Road
Chicago 26, Illinois

Please forward complete information on the following products and services described in the June, 1954 issue of TELEPHONE ENGINEER & MANAGEMENT (Check Information desired.)

NP 629 NP 630 NP 631 NP 632 NP 633

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ADV. 11	ADV. 12	ADV. 13	ADV. 14	ADV. 15
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Mr. J. E. Richardson
Personnel Director

MARYLAND ELECTRONIC MFG. CORP.

5009 Calvert Road
College Park 7, Maryland

HELP WANTED:—Manager wanted for newly organized Ben Lomand Rural Telephone Cooperative, Incorporated, with headquarters in McMinnville, Tennessee. Must have administrative ability to achieve and maintain efficient operations and develop sound expansion programs. Appropriate application form upon receipt of request. Address R. B. Miller, Rock Island, Tenn.

TELEPHONE ACCOUNTANT:—To take full charge of accounting for Class A Company. Prefer young man with 5-7 years telephone experience and potential to assume managerial responsibilities. State starting salary required. Box #8891, Telephone Engineer Publishing Corp., 7720 Sheridan Rd., Chicago, Ill.

HELP WANTED: — Manager for rapidly expanding (cooperative) rural telephone system located Melrose, Florida. Must have administrative ability to maintain efficient operations and develop expansion programs. Ability to hire, train and direct personnel in all phases of telephone operations. Technical, plant and commercial knowledge and experience required. Permanent position carrying substantial opportunity for qualified person. Replies confidential. For application blank, please write Frederick Wm. Burt, Box 163, Interlachen, Fla.

MANAGER WANTED for magneto system converting to dial with new construction. Must be able Administrator and have working knowledge of all phases of telephone operations. Real opportunity for qualified person. Replies confidential. Write for application forms to M. C. Plummer, Three Rivers Rural Telephone Co-op., Fairfield, Montana.

WANTED — A Man for line work and maintenance. We have two exchanges, one common battery and one magneto. Steady employment. Border Telephone Company, Syracuse, Kansas.

CABLE SPLICER—Class A telephone company operating approximately 35,000 stations, located in the middle west. Excellent working conditions, wage $2.41 per hour, employee benefits, paid holidays. Must have four years experience on underground and aerial cable work. Write Box 8895, Telephone Engineer Publishing Corp., 7720 Sheridan Road, Chicago 26, Illinois.

WANTED—Chief Operator. Permanent position, must be thoroughly experienced in all phases of manual local and inter toll dial operation. Must have ability to select new employes and supervise training. Excellent working conditions, salary commensurate with experience, all employe benefits, Class A Telephone Company, location — Southern Ohio. Write Box 8888, Telephone Engineer Publishing Corp., 7720 Sheridan Road, Chicago, Ill.

Manager wanted for $500,000 cooperative rural telephone system located in South Central Kansas. Must have administrative ability. Some knowledge of telephone systems desired. Permanent position with good opportunities for qualified person. Replies confidential. Please write Govan Mills, Pres., Lake City, Kansas.

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3035 ALDRICH AVENUE, MINNEAPOLIS, MINN.

POSITION WANTED

POSITION WANTED — Engineer, BSEE, 6 years broad experience in equipment engineering and related fields, desires relocation with operating company offering opportunities for widening of scope and advancement. For resume, write Box 8894, Telephone Engineer Publishing Corp., 7720 Sheridan Road, Chicago, Illinois.

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FOR SALE
COMPLETE TELEPHONE EXCHANGE EQUIPMENT, CONSISTING OF — —

5 position Stromberg-Carlson central energy multiple switchboard. Each position has 17 universal cord circuits. Multiple wired and equipped with 1060 lines. Wired and equipped with 11 toll circuits. Equipped for up to eight party full selective harmonic machine ringing with Leich harmonic ringing converter with automatic change to standby; including all necessary power equipment and 24 amp Flotrol Charger

Complete new key shelves installed in 1952 when converted to harmonic selective ringing.

Complete mainframe equipped with Cook No. 3800 type protectors.

2 positions of the equipment were installed new in Nov. 1940, 1 position installed new in 1942, and 2 positions installed new in 1950.

Equipment has been properly maintained and in first class condition.

Now in operation, but should be available in October, 1954 account conversion to dial operation.

If interested, contact
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Equipped with capsule type transmitter and receiver. Can be used on long rural lines.
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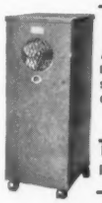

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W. E. 80-line Emergency Reporting Switchboard - $800
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(Continuous 1-Mile Length)
Latest style Signal Corps, Thermoplastic jacket, 2-conductor twisted pair (4 copper, 3 steel). Spliced with 3-045B Nicropress Sleeves and sealed with air-tight plastic sleeves.
Continuous 1-Mile Reel—$20.00 ea.
TELEPHONE REPAIR & SUPPLY COMPANY
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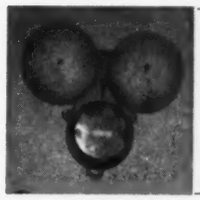

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Loud ringing bells, 1000 or 2500 Ohm @ $8.00 each. With Condensers @ $9.00 Each.
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SPECIFY **TELERING** for
Dependable and Economical Telephone Ringing Power Equipment.
Engineered for complete satisfaction.
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Cable Splicers Platforms and Tents, complete with lines, tent bows, etc. Price $30.00
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UNITED UTILITIES, INCORPORATED
37th Consecutive Dividend

The Board of Directors declared a quarterly dividend of 27½ cents per share on the outstanding common capital stock of the company, payable on or before June 30, 1954, to stockholders of record at the close of business June 8, 1954.

Abilene, Kas. May 14, 1954 **ALDEN L. HART. President.**

FOR MAGNETO SWITCHBOARDS
W. E. #22-C Combined Jacks and Signals on #89-B Mounting (5 per strip) *NEW*
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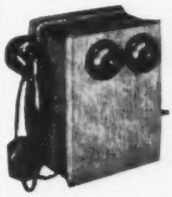

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Input, 115-V-AC-60 Cy. Output, 20 cycles.
Small PBX Type ..... @ $30.00
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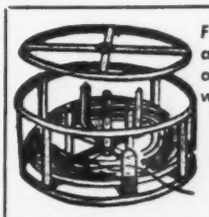
FOR SALE: 100 magneto ringing boxes. Cooleemee Telephone Company, Cooleemee, North Carolina.



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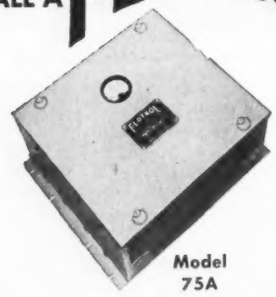
WANTED — Dial Switchboard 100 to 150 lines. Earn Nunneley, St. Jo, Texas.

WANTED—Good, used, small relay dial switchboard. Cash, if price is right. Bayshore Telephone Co., Rt. 2, Box 469H, Jacksonville, Florida.

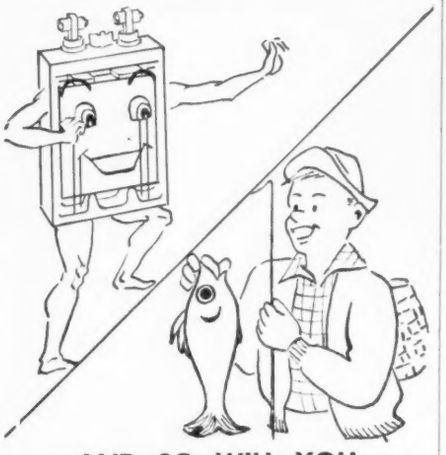
TAKE A LOAD OFF
YOUR BATTERIES

AND OFF YOUR MIND
INSTALL A FLOTROL



Model 75A

THEY'LL ENJOY THE REST



AND SO WILL YOU

FLOTROL has no moving parts, requires no routine maintenance or adjustment; it supplies the load current as you need it, doesn't wait for the load to pull the battery down and then recharge the battery. Result—longer battery life, less power consumption, fully charged batteries all the time, and scores of maintenance man-hours saved yearly.

Single-phase models from 1/2 ampere to 24 amperes, described in Bulletin 160.

Three-phase models from 25 amperes to 200 amperes, described in Bulletin 161.

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1122 F STREET LORAIN, OHIO

FLOTROL
PARTNERS IN DEPENDABILITY
SUB-CYCLE

Concluded From Page 105

tion Mr. Quisenberry's suggestion for improving the public relations phase of the government's personnel program — a suggestion adopted in part by the Hoover Commission and the Civil Service Commission.

Mr. Quisenberry has already established himself in Chicago, and has assumed his new position.

F. M. Parsons Dies

THE INDEPENDENT Telephone industry lost one of its best known leaders and good friends May 24 in the death of Francis M. "Red" Parsons, 56, vice president and sales manager of Kellogg Switchboard & Supply Co., a division of International Telephone & Telegraph Corp., 6650 S. Cicero Ave., Chicago. Mr. Parsons, who had been a telephone man before he was old enough to vote, died after a several months' illness at his home in Riverside, Ill.

F. M. PARSONS

Funeral service was held May 26 from St. Mary's Church in Riverside, and burial was in Queen of Heaven Cemetery, Hillside, Ill.

Born in Omro, Wis., March 4, 1898, the son of the late L. M. Parsons, a pioneer in the then new telephone industry, the Kellogg executive began his career in telephony with his father in the Northwestern Telephone Co. in Bismarck, N. D. He worked for the Cooperstown, Mandan and Bismarck exchanges of the Company, interrupting his career to serve in World War I. He was a Wire Chief of the Bismarck exchange.

In 1923, Mr. Parsons joined the Kellogg company sales division, leaving in 1928 to take over the position of superintendent, Telephone Division of the Central Western Public Service Co., Omaha, Neb.

Rejoining the Kellogg company in 1934, Mr. Parsons served successively as manager of its switchboard sales department, supervisor of field representatives and Eastern division manager. In 1944, he was appointed sales manager, and in August, 1952, he was elected vice president of the company.

Keenly interested not only in his own company's progress in the telephone field, "Red" was an enthusiastic leader in the U. S. Independent Telephone Association and the Indepent Telephone Pioneer Association, serving as a vice president of the latter national organization. He served the U. S. Independent Telephone Association in various capacities and held several committee chairmanships during his career.

Always forward-looking and confident for the future, Mr. Parsons was looking ahead to returning to his much loved career when he died. It was a great regret that he could not attend the 1953 USITA convention in Chicago last October, but he was then just rallying from major surgery.

The Kellogg executive was a well known member of the Chicago Sales Executives Club, the American Institute of Electrical Engineers, a past president of the Riverside (Ill.) Golf club, a member of Riverside Post, American Legion, and a life member of the Bismarck (N. D.) Elks lodge.

He leaves his widow, Alice, one son, Richard, and a daughter, Mary Alice. He also leaves one brother, Paul, general manager of the Rhinelander Telephone Co., Rhinelander, Wis., and a sister, Genevieve, of Chicago.

New Literature

TAPER TERMINALS:- A brochure containing facts and description of new self-locking taper connectors is being issued by *Aircraft-Marine Products, Inc.*, 2100 *Paxton St., Harrisburg, Pa.* Developed particularly for the Electronics and Communications fields, the terminals combine miniature size and self-locking action and are used primarily as connectors for individual wires.

STROMBERG-CARLSON®

transmitter

Published by the makers of Famous XY® Equipment

VOL. 3, NO. 3 JUNE, 1954

Henderson, Nevada is Making its Future Bright

Hershel Trumbo (left), manager of the Henderson Telephone Company, accepts congratulations of Nevada's Governor Charles Russell on completion of dial cutover.

Like a fable of old is this success story, except that there was no fairy godmother to smooth the way with a magic wand. The builders of Hoover Dam, driving to Las Vegas, passed over 30 miles of uninhabited desert. Now, halfway between Boulder City and Las Vegas stands Nevada's third-largest city — Henderson. Here on April 1 of this year, 1200 lines of XY Dial were cut into service by Hershel Trumbo and Bill Urga, co-owners of the Henderson Telephone Company.

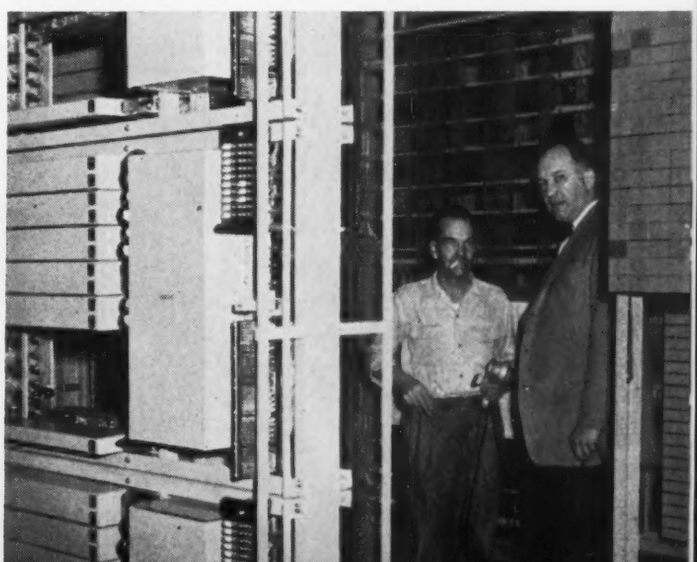
The importance of this event can best be understood if we go back a few years and relive the history which has been made here.

Chapter I is related to the government-sponsored Basic Magnesium Project at the beginning of World War II. Abundant cheap electric power from nearby Hoover Dam determined the site; the huge sprawling plant was built, and housing for 7,000 workers and their families. While no telephone company served the town as such, the plant had a large PBX serving its own facilities.

Chapter II is the period when most people wrote off Henderson as another Western ghost town. The government project was completed; the entire town — plants, homes and telephone system — became the property of the state. Perhaps the only two people formerly employed on the project who took other than a dim view were Hershel Trumbo and Bill Urga. Their first accomplishment — some in those parts called it a gamble — was to acquire the telephone franchise. How many others would have had the faith to

"What does a Governor say to his wife?" Many at the Henderson dial conversion seem curious about this, including (from left) W. O. Haynes, construction engineer; the Governor; Bill Urga, co-owner of the Henderson Telephone Co., and R. A. Allen, chairman of the Public Utilities Commission.

Bill Rockwood, administrative assistant to John Voss, General Manager Telephone Division of Stromberg-Carlson, has a quiet chat with Otis Pierson, one of the Stromberg-Carlson installers, in the XY equipment room. Elmo Landry was chief of the installation crew.



STROMBERG-CARLSON transmitter

Lucky man in the center is Phil Lucier, manager of the Stromberg-Carlson Credit Corp. Bill Urga (left) chaperones the group: Mrs. Urga, Mrs. Trumbo and J. P. Galligan, San Francisco Branch manager.

It's always exciting at this point. Bill Urga and Hershel Trumbo pull the picks to convert telephone system to XY Dial.

April 1 Cutover "Fools" only the Skeptics; Hershel Trumbo, Bill Urga Convert 1200 Lines

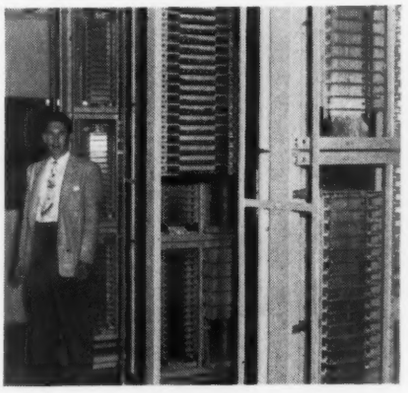
negotiate for a system with more equipped lines than inhabitants — and at this time people were still leaving!

Chapter III is still being written. Those interested in Henderson — and Hershel Trumbo and Bill Urga were leaders in the movement — brought new industry and workers to the abandoned plant and homes. An additional new town site has been added, doubling the population at the peak of the war boom. Now the telephone situation found the shoe on the other foot: from unused lines to a mountainous stack of held orders. Had they been too successful?

These two men who saw a future in dormant Henderson wanted (and bought) a system which is geared to the most optimistic future — XY Dial. R. H. Phelps, sales representative, Fred Fairly, sales engineer, and Phil Lucier and R. D. Shoemaker of the Credit Corp. worked with the owners to bring their plans into reality. The outstanding building for the new office has been described in these columns as part of your editor's "Postman's Holiday." We shall never forget the warm hospitality as "West" welcomed "East."

Conversion Day brought to Henderson Governor Russell, Public Utilities Chairman Allen, representatives of the Pacific Tel. and Tel. Co., the Southern Nevada Telephone Co., the Bank of Nevada and the Bank of America, as well as Stromberg-Carlson personnel. Mrs. Trumbo and Mrs. Urga were gracious hostesses at a pre-cutover informal; after the completion of the switchover a dinner party for the Governor, the Commissioner and special guests was held at the Lake Mead Lodge.

In the persons of Hershel Trumbo and Bill Urga (and their wives whose faith never faltered) the city of Henderson and its telephone needs have able champions. Now, with their good work an accomplished fact, even the most cautious will agree that "the future is bright."



The excitement over, Bob Phelps, territorial sales representative, spends a quiet moment amid the "purring" XY switches.

Attractive, spacious business office was flower-bedecked for Henderson's cutover.

Striking new building is modern and functional — and has a palm tree growing through its roof!

STROMBERG-CARLSON transmitter

"New Look" at Stromberg-Carlson, Part I — Drafting Department

Dean of the Department in years of service — Gerard Gerstner.

Archie Baragato is group leader of Circuit Design, Russell Smith heads the New Apparatus Design section.

Michael Areno and Charles Salisbury find that pooling efforts pays dividends.

Lewis C. Freeman, Chief Draftsman. Mrs. Carr, Secretary.

This group, in closest collaboration with the Engineers, proves out new ideas.

William McDowell and his group work on Equipment and Job Drawings.

The distaff side is capably represented by Jean Friz.

STROMBERG-CARLSON transmitter

Three Sales Engineers Serve Mid-Continent From Chicago

This is the second in a series of biographies of the Stromberg-Carlson Sales Engineers serving the various territories through the branch offices. The Chicago Branch, under the vigorous and effective management of W. J. ("Jim") Pfaender, has three such specialists working in closest liaison between the salesmen in the field and the home office engineers.

Ray E. Hoffman

During his early years with Stromberg-Carlson, Ray E. Hoffman had to be content with the sobriquet "young Ray," since his father Raymond O. already had established a respected place among the telephone

fraternity. Now they share the honors, for son Ray is the "Senior" of the Chicago Branch sales engineers. A gruelling schedule of customer consultations has taken him into every corner of this throbbing heartland of America.

Ray grew up in Rochester, graduating from Irondequoit high school in three years. He loved to swim and one day this proved fortunate for himself and his companions when their speed boat capsized in a storm. He swam over a mile to the Coast Guard station to summon help, then assisted in the rescue. Only his parents gave it a second thought — to Ray it was "just the natural thing to do."

While completing the course in Electrical Engineering at the University of Alabama in Tuscaloosa, Ala., Ray worked summers at Stromberg-Carlson. After experience in drafting, systems engineering, dial circuit design and a bit of installing on some of the first dial C.D.O.'s, Ray "crammed" for his present job, going to Chicago eight years ago.

Married in 1941 to Ruth Karnes of Rochester, the Hoffmans have four boys: Robert, John, James and Philip. Not to be forgotten is their prize husky "Yukon," trained to perfection. Their home in a Chicago suburb is designed for good family living — even to an elaborate electric train layout for the "five boys." Of late Ray spends much time designing and building his own high fidelity music system.

Frank Monaghan

Second right arm for Jim Pfaender in the sales engineering group is Frank Monaghan, who offers experience in many aspects of telephony for the service of customers in the northern part of the Chicago territory.

His career in this field was shifted, at the request of Uncle Sam, to Germany where the Signal Corps assigned him supervisory work on Carrier Installations during the war and the

period of post-war occupancy. Joining Stromberg-Carlson in 1947, Frank installed some of the larger XY Systems in various parts of the country. After a year's experience with an Independent operating company, he entered the National Sales Engineering group where he was trained for his present position with the Chicago Branch.

Frank is best known to the managers in Minnesota, Wisconsin and the Dakotas. In Minnesota, particularly, there is a tremendous swing to dial operation and here Frank's practical knowledge of XY and the pre-conversion problems of manual companies are proving invaluable.

Frank and his charming wife live on the western rim of Chicago — or perhaps we should say that this is headquarters between trips to the Land of the Sky Blue Waters.

Sidney Crook

Field experience in XY installations led to Sidney Crook's appointment as a National Sales Engineer early in 1953. In January of this year his services were requested by the Chicago Branch as territorial sales engineer, with the states of Iowa and

Illinois as his especial responsibility.

Before joining Stromberg-Carlson, Sid took Engineering at the University of Kansas City, then worked for the St. Louis division of Western Electric company as an installer. For two years after this he was an installer for the United Telephone Co. of Missouri.

Sid will be remembered for his work on the Stephenville, Texas, XY System and also at Evansville, Minn. where he was installation foreman. At several other locations he made additions to present dial systems.

In 1952 he was married to Lois Melton of Genoa, Ill. They are now living in Bellwood, Illinois, on the western edge of Chicago.

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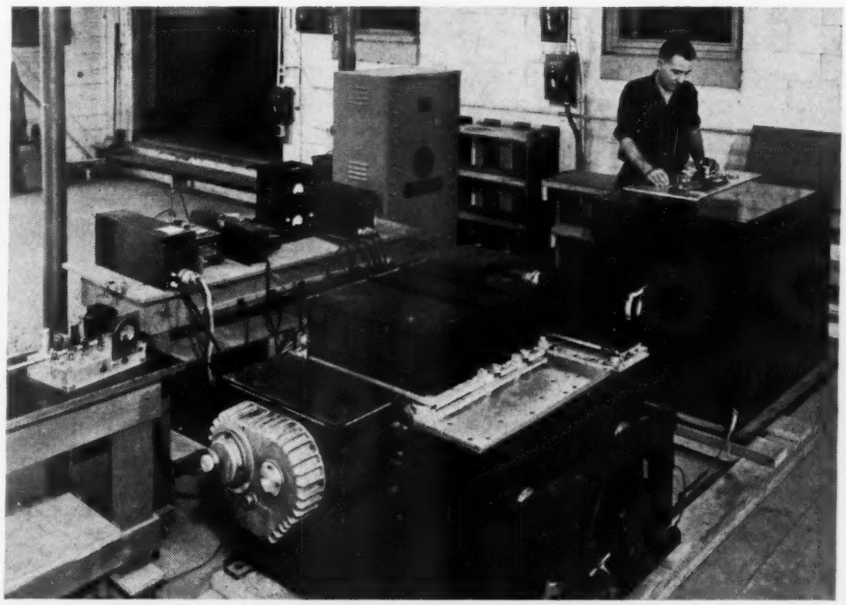
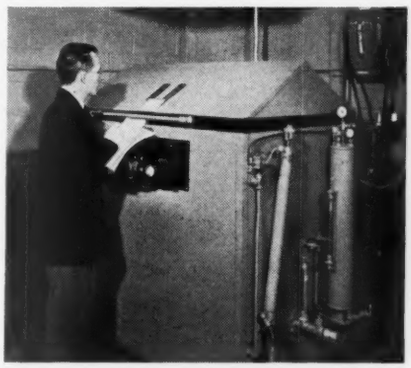
Now available for you to use:

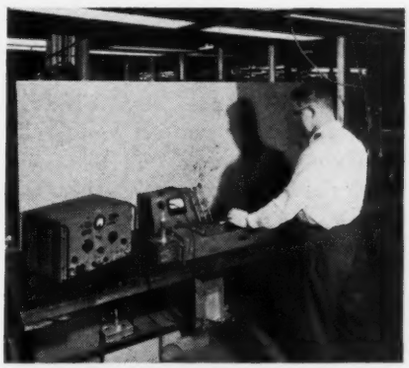
Electronic and Environmental Test Facilities



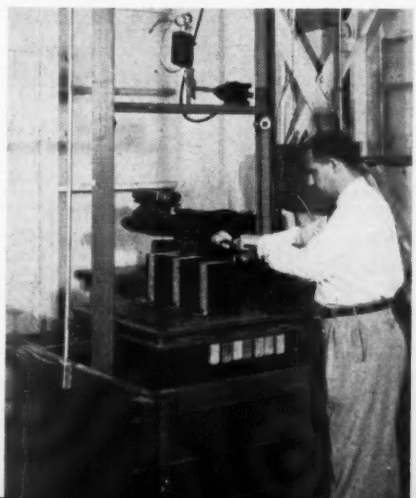
***SHAKE 'EM UP!** This vibration test stand creates a minor earthquake to test stability of construction.*



***WILL IT RUST?** If equipment passes this test, you needn't worry about corrosion. This is a salt spray and humidity chamber.*

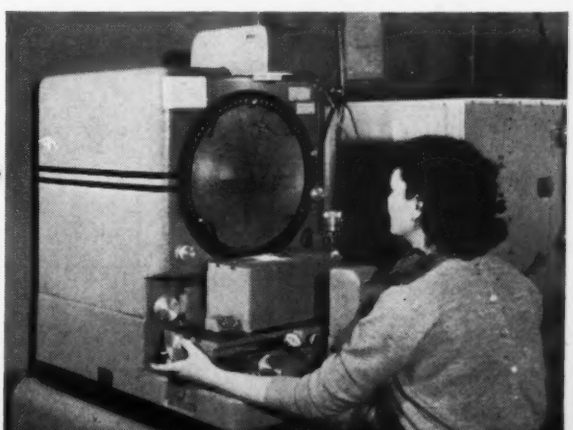


***MICROWAVE** test equipment provides complete facilities for checking high frequency, short wave transmission and reception.*



***TOOTH RATTLER.** This shock testing machine comes to a dead stop at speeds as high as 2,560 feet per second!*

***BEAUTY CONTEST.** If the shape of a sample is the least bit irregular, it will stand out like a sore thumb when magnified up to 100 times on this Kodak Contour Projector.*



On a hilltop ten miles outside of Rochester, N. Y. stands a cluster of activity called the Stromberg-Carlson Test Center.

We deliberately placed these facilities miles away from other Stromberg-Carlson plants so that the testing engineers and specialists can work under isolated, ideal conditions.

The electronic and environmental test facilities at this center are the most modern available. Not a single item of major equipment is more than a year old.

The equipment you buy from Stromberg-Carlson is tested by many of the devices shown on this page. Many other instruments and machines, for testing everything from church carillons to radar equipment, provide a complete testing center for electronic and electrical equipment.

Recently the doors of the Test Center were thrown open to our customers. This means you can have your equipment tested (no matter what its origin) by engineers thoroughly experienced in telephony.

To solve a tremendously wide range of electrical testing problems, testing engineers can call upon other Stromberg-Carlson departments, such as Research, Electronic Engineering, Material, Physical Test and Instrument Laboratories.

If you have a testing problem — one which, because of its scope or the expense of setting up facilities is too large for the operating telephone company to pursue — we invite your inquiries, address to Rochester.

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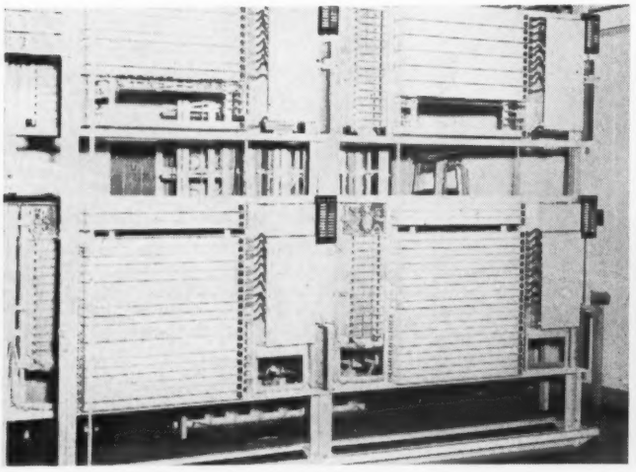
Southwestern States Telephone Company Adds Important Link With XY Cutover at Welsh, Louisiana



Part of the new XY equipment recently cut over by Southwestern States Telephone Company to serve the 653 subscribers at Welsh, Louisiana.

Shown at conversion of Welsh exchange are (center) Harry N. Hammond, general plant superintendent; (l) E. G. Browell, and (r.) C. H. Price, Stromberg-Carlson.

As part of its continuing program to bring better service through modernization, the Southwestern States Telephone Company focused its attention on the community of Welsh, Louisiana.

Here was an important telephone center, linking many smaller communities which had already been cut over to dial service, while Welsh remained manual. Harry N. Hammond, general plant superintendent, and W. F. Davidson, equipment engineer, rolled up their sleeves and worked out the arrangements required to make these older dial systems compatible with the new Stromberg-Carlson XY System they wanted to install at Welsh.

When they had overcome this obstacle, the way was clear for their new 400-line XY MDO, which was cut over on February 15. This system serves 653 subscribers. The five tributary exchanges total another 403 subscribers.

At the same time, a 4-position No. 3 toll board was installed at the Welsh exchange. With these new developments, five communities are now linked by extended area service.

The new XY equipment and offices of the Welsh exchange are housed in a modern, completely renovated building which also contains Southwestern States' divisional office, controlling 22 exchanges. Storage and garage space are also provided under the same roof.

Participating in the cutover were Joe M. Nelson, district manager; C. R. Lee, traffic superintendent; J. P. Smith, traffic supervisor; Wade O. Martin, Sr., Louisiana Public Service Commissioner; and Sammy Nichold, director of the utilities division of the Commission.

XY Dial Now Serves Mulberry Grove, Illinois

Mrs. Dorothy Gum, President of the Mulberry Grove (Ill.) Telephone Company had good reason to be proud this Spring when Mayor Kious placed the first call over her new XY Dial System. This was especially understandable as she represents the second generation of the Gum family to provide telephone service for Mulberry Grove. Her son Norman, now Manager, and daughter Gloria, Vice President, are carrying on with the most modern equipment and forward-looking ideas.

Mulberry Grove thus joins a growing number of cities and towns located on U.S. Route 40, crossing southern Illinois, which are now enjoying the benefits of XY Dial service. Your editor, following this route last summer enjoyed the opportunity to visit with many of these owners. All seemed optimisitic for the future of this region and have taken steps — in the same direction as Mrs. Gum — to provide the best telephone service possible.

The Mulberry Grove exchange is entirely unattended; in the original design of the system, provision was made for the introduction of customer toll dialing as soon as this is available in the Illinois "downstate" area.

Published by Stromberg-Carlson . . . makers of Famous XY Equipment

"STROMBERG-CARLSON" AND "XY" ARE REGISTERED TRADE MARKS OF THE STROMBERG-CARLSON COMPANY, ROCHESTER, N. Y.

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THE BACK OF THE BOOK

BY JOHN G. REYNOLDS

Self-Service

THE SCHENECTADY (N.Y.) *Union-Star* recently printed a story which is typical of the untypical situations service reps meet every day. Carrying a large paper bag, a Chinese gentleman entered the business office, stopped at a representative's desk, plunked down the bag and said, "Here, I'm through with this." Then he opened the bag — and there was his telphone, wall box and all.

The rep gulped and asked him if he was dissatisfied with his service. "Oh, no," he replied. "I just don't need a telephone any more." He explained he'd thumbed through the telephone book for instructions on removing the telephone, but finding none, he'd played it by ear — disconnecting all wires with great care.

The rep thanked him, but emphasized the Company is accustomed to performing this service itself. Explanation: seems that in China the subscriber owns his own telephone and can move it around to suit himself.

"Voice With A Smile"

IT'S LITERALLY done with mirrors in a big Detroit department store. Recently when it remodeled its telephone order department company officials placed a looking glass in front of each girl. These operators handle as many as a hundred transactions apiece each day. Nobody can blame a girl much if toward the end of a hectic eight-hour stint, her voice begins to loose some of its friendliness. Hence, the mirrors. By glancing at her own face now and then the operator can see what her voice sounds like to the customer. If she is tired or inclined to be irritable, the mirror lets her know. She checks herself, readjusts her expression and is once more "the voice with a smile."

They Talk More In Canada

CANADA IS GABBIER than the United States, on a per capita basis, according to an international survey by A. T. & T. Canadians made 388.7 phone calls in each 1,000 population, Americans 382.1, and, surprise of the probe of telephone habits was Iceland, which was a strong third in the chatter sweepstakes with 360.1 calls per 1,000 population. However, in overall volume of telephone usage, either local or long distance, United States was without competition. And if you want to get away from telephones, A. T. & T. guarantees there are no commercial telephones in Greenland or on the Pitcairn Islands.

"Seven-Year Wait"

TELEPHONES are not utilities in Tokyo; they're luxuries. A picture in the *Nippon Times*, an English language paper, showed Shozo Itokawa, proprietor of a haberdashery shop, grinning broadly and holding a congratulatory bouquet. Tokyo's 300,000th telephone had just been installed in his store. He waited seven years for it.

"Night Letter"

PRACTICALLY every one who ever sent a telegram is familiar with the Night Letter but few people realize how it came about. The idea originated with a railroad station agent. He noticed that Western Union had to maintain staffs for twenty-four hour service in its various agencies, despite the fact that 99% of the telegrams were sent during an eight-hour business day. This maintenance kept the price of telegrams so high that many people couldn't afford them.

It was the station agent who thought up the Night Letter or bargain inducement of twenty-five words at a flat low rate.

Of interest to telephone people is the fact that the name of the station agent was Theodore N. Vail, who later became the first A. T. & T. president.

Fatal Accidents Increase!

WHILE THE SAFETY results published by the *National Safety Council* continue to show that telephone work is more than five times safer than the average industry, there has been an increase in fatalities during recent years. This unfavorable trend has been due largely to an increase in motor vehicle cases. Telephone people will not be satisfied until ways and means have been found to eliminate all such unfortunate accidents.

Lost time injuries per 1000 employes:

	1944	1950	1951	1952	1953
Men	4.90	1.91	1.94	1.87	1.86
Women	7.39	3.99	2.91	2.02	1.76
Total	6.71	3.26	2.58	1.97	1.79
No. Fatalities	8	12	8	13	14

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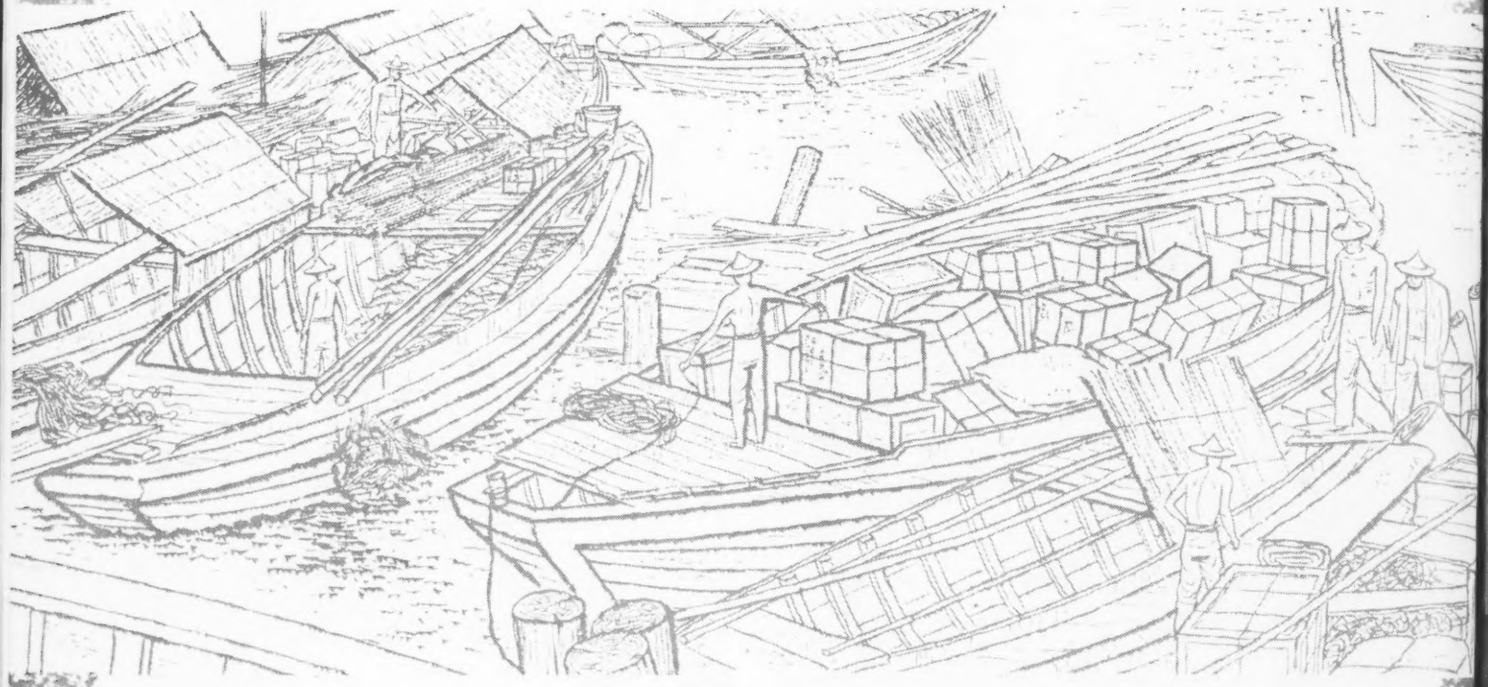

Number Six
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of a series

Even the most capable of men, when placed in a situation which is foreign to him, feels awkward and out of place.

Many independent telephone companies follow a directory publishing procedure which attempts to employ highly specialized operating personnel, once each year, as directory sales people, production supervisors, printing experts, and so forth. The end result is often something less than the subscribers deserve and the net profit is almost always less than the amount to which the company feels entitled.

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